

637097

Report Number: 214-TRC-03-016

Safety Compliance Testing For FMVSS 214

Side Impact Protection

Indicant

Daewoo Auto and Technology Company

2004 Suzuki Forenza S 4-door

NHTSA Number: C40508

Transportation Research Center Inc.

10820 State Route 347

P. O. Box B-67

East Liberty, OH 43319



Test Date: February 18, 2004

Final Report: March 2, 2004

**U. S. Department Of Transportation
National Highway Traffic Safety Administration
Enforcement**

Office of Vehicle Safety Compliance

400 Seventh Street, S. W.

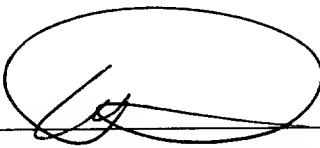
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		14. Sponsoring Agency Code NVS-220																															
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16. Abstract <p>This 56/28 km/h 90° Impact (Moving Deformable Barrier) Compliance Test was conducted on the subject vehicle, a 2004 Suzuki Forenza S 4-door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-06 except the test was conducted 8 km/h (5 mph) faster than the standard specifies to determine FMVSS 214 Side Impact Protection compliance. This test was conducted by Transportation Research Center Inc. in East Liberty, Ohio, on February 18, 2004.</p> <p>The impact velocity of the Moving Deformable Barrier (MDB) was 62.0 km/h, and the ambient temperature at the struck (Driver's side) side of the target vehicle at the time of impact was 21° C. The target vehicle's post-test maximum crush was 356 mm at Level 2.</p> <p>The test or target vehicle's performance is given below (with FIR filter):</p> <table border="0"> <thead> <tr> <th></th> <th><u>Front SID HIII</u></th> <th></th> <th><u>Rear SID HIII</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td><u>74.6</u></td> <td>g's</td> <td><u>61.7</u></td> <td>g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td><u>55.7</u></td> <td>g's</td> <td><u>82.0</u></td> <td>g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td><u>106.7</u></td> <td>g's</td> <td><u>67.8</u></td> <td>g's</td> </tr> <tr> <td>Thoracic Trauma Index, (TTI):</td> <td><u>90.6</u></td> <td>g's</td> <td><u>74.9</u></td> <td>g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td><u>96.3</u></td> <td>g's</td> <td><u>112.9</u></td> <td>g's</td> </tr> </tbody> </table> <p>The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during side impact event. A static rollover test was not preformed.</p>					<u>Front SID HIII</u>		<u>Rear SID HIII</u>		Left Upper Rib Acceleration:	<u>74.6</u>	g's	<u>61.7</u>	g's	Left Lower Rib Acceleration:	<u>55.7</u>	g's	<u>82.0</u>	g's	Lower Spine Acceleration:	<u>106.7</u>	g's	<u>67.8</u>	g's	Thoracic Trauma Index, (TTI):	<u>90.6</u>	g's	<u>74.9</u>	g's	Pelvis Acceleration (PEV):	<u>96.3</u>	g's	<u>112.9</u>	g's
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Section 1

Purpose and Test Procedure

This side impact test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-02-D-11114. The purpose of this test was to evaluate side impact protection in a 2004 Suzuki Forenza S 4-door. The test was conducted in accordance with the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 2001) (except the test was conducted 8 km/h (5 mph) faster than the standard specifies).

Section 2

Summary of Side Impact Test

A 2004 Suzuki Forenza S 4-door was impacted on the driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 62.0 km/h (38.5 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, Ohio on February 18, 2004. Pre-test and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SID HIIIs) are included in Appendix A.

Two restrained Side Impact Dummies (SID HIIIs) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the OVSC Side Impact Laboratory Test Procedure (TP-214D-06, dated July 2001). Both SID HIII dummies were certified prior to this test. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SID HIIIs were instrumented with the following accelerometers:

1. Head (HED) triaxial and redundant accelerometers (X, Y, and Z-directions)
2. Neck (NEK) triaxial force and moment load cells (X, Y, and Z-directions)
3. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y-direction)
4. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
5. Lower Thoracic Spine (T₁₂) uniaxial and redundant accelerometer (Y-direction)
6. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)

A summary of the side impact dummy (SID HIII) configuration and verification test data can be found in Appendix C. A total of seventy-two (72) channels of data were recorded. Appendix B contains the vehicle, MDB, and dummy response data traces.

The following tables summarize the results of the test:

Injury Criteria	Front SID HIII	Rear SID HIII
TTI (g)	90.6	74.9
PEV (g)	96.3	112.9

Head Injury Criteria (HIC)

Injury Criteria	Front SID HIII	Rear SID HIII
HIC	248	958
t_1 (ms)	30.64	48.48
t_2 (ms)	35.44	58.16
Average Acceleration $t_1 - t_2$ (g)	76.4	99.3

HIC is as defined in FMVSS 208. The maximum time interval t_1 to t_2 is 36 ms.

Neck Injury Criteria

Maximum Values	Front SID HIII	Rear SID HIII
Neck X-axis Force (N)	-1118	765
Neck Y-axis Force (N)	-1631	-2075
Neck Z-axis Force (N)	1639	-1420
Moment About X-axis (Nm) ¹	-65.1	-117.2
Moment About Y-axis (Nm)	-73.0	38.3
Moment About Z-axis (Nm)	42.7	-20.9

¹ Calculated about the occipital condyle with the following formula: $M_{occ} = M_x + 0.01778F_y$.

Data Acquisition Explanations

The vehicle's left middle A-pillar Y-axis acceleration channel, LMAYG1, recorded questionable data throughout the test. The velocity was also affected.

The vehicle's left rear seat track Y-axis acceleration channel, LRTYG1, recorded numerous questionable data spikes throughout the test. The velocity was also affected.

The moving deformable barrier's left and right side contact switch channels, MDBL1 and MDBR1, did not record an event during the test.

A static rollover rest was not performed following impact for this test vehicle due to a TRC Inc. equipment malfunction. The vehicle was inspected post-test by the TRC Inc. test technicians, no liquid fuel leaks were detected.

Section 3

Summary of Test Results

Data Sheet 1

General Test Vehicle Parameter Data

Test Vehicle Information:

Vehicle Year/Make/Model: 2004 Suzuki Forenza S
Vehicle Body Style/Color: 4-door/Silver VIN: KL5JD52Z34K926166
Vehicle NHTSA No.: C40508 Build Date: 09/03
Engine Data: 4 Cylinders; CID; 2.0 Liters; cc
Placement: - Longitudinal; or X Lateral; or - Horizontal
Transmission: 5 Speed; X Manual; - Automatic; - Overdrive
Final Drive: - RWD; X FWD; - Four-Wheel Drive
Odometer Reading: 66 miles
Options: X A/C; X Power steering; X Pwr. brakes; X Power windows

Data From Vehicle's Tire Placard:

Tire Pressure (at capacity)* 210 kPa Front; 210 kPa Rear
Recommended Tire Size: P195/55R15
Tires on Test Vehicle: P195/55R15 Manufacturer: Hancock, Optimo

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; 3rd seat; 5 Total
Type of Front Seats: X Bucket; - Bench; - Split bench
Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob
Vehicle Max. Capacity Loading = 396 kg (A)
No. of Occupants x 68.04 kg. = 340 kg (B)
Vehicle Cargo Capacity (A-B) = 56 kg

Test Vehicle Delivered Weight With Maximum Fluids:

Left Front	=	<u>391.0</u> kg	Left Rear	=	<u>250.5</u> kg
Right Front	=	<u>384.5</u> kg	Right Rear	=	<u>246.5</u> kg
Total Front	=	<u>775.5</u> kg	Total Rear	=	<u>497.0</u> kg
Front % of Total Weight	=	<u>60.9</u> %	Rear % of Total Weight	=	<u>39.1</u> %
Total Weight	=	<u>1272.5</u> kg			

* Tire pressure used in test.

Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Calculation Of Vehicle's Target Test Weight:

Total Test Vehicle Delivered Weight With Max. Fluids = 1272.5 kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle = 56.0 kg (B)
Weight of Instrumented Side Impact Dummies (2 X 84.0 kg) = 168.0 kg (C)
Test Vehicle Target Weight: = 1496.5 kg (A+B+C)

Fully Loaded Test Vehicle (UDW + 2 SID HIII s + Cargo):

Left Front	=	<u>441.5</u> kg	Left Rear	=	<u>363.5</u> kg
Right Front	=	<u>379.5</u> kg	Right Rear	=	<u>315.5</u> kg
Total Front	=	<u>821.0</u> kg	Total Rear	=	<u>679.0</u> kg
Front % of Total Weight	=	<u>54.7</u> %	Rear % of Total Weight	=	<u>45.3</u> %
Total Weight	=	<u>1500.0</u> kg			

As Tested Weight of Test Vehicle (2 SID HIII s + Cargo + Equipment & Instrumentation):

Left Front	=	<u>437.6</u> kg	Left Rear	=	<u>331.6</u> kg
Right Front	=	<u>406.0</u> kg	Right Rear	=	<u>316.6</u> kg
Total Front	=	<u>843.6</u> kg	Total Rear	=	<u>648.2</u> kg
Front % of Total Weight	=	<u>56.5</u> %	Rear % of Total Weight	=	<u>43.5</u> %
Total Weight	=	<u>1491.8</u> kg			

Test Vehicle Attitude (all dimensions in millimeters):

As Delivered	Fully Loaded	Ready For Test
Right Front <u>665</u>	Right Front <u>623</u>	Right Front <u>630</u>
Left Front <u>664</u>	Left Front <u>596</u>	Left Front <u>633</u>
Right Rear <u>677</u>	Right Rear <u>616</u>	Right Rear <u>634</u>
Left Rear <u>674</u>	Left Rear <u>645</u>	Left Rear <u>632</u>

Test Vehicle Wheelbase: 2600 mm

C.G. = 1131 mm rearward of front wheel centerline

Total Vehicle Length:

Right Side = 4390 mm
Left Side = 4390 mm
Centerline = 4500 mm

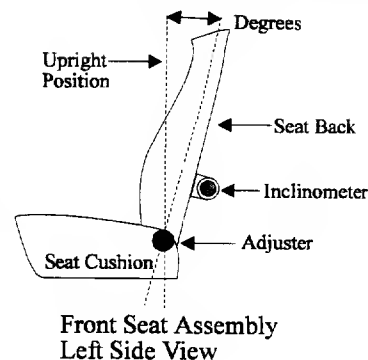
Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.



Front Seat Cushion Placement: Middle of geometric
range of travel (11th of 20 detents).

Total Length of Fore/Aft Adjustment Travel: 230 mm

Total Number of Adjustment Positions or Detents: 20

Front Seat Back Adjustment Position: The seat back was adjusted to produce a 25° manikin torso angle.

Seat Back Torso Angle: 25.2 degrees

Second Position Seat Placement: Fixed

Total Length Of Fore/Aft Adjustment Travel: N/A mm

Seat Back Adjustment Position: N/A

Adjustable Steering Column Position: Adjusted to middle of the geometric range of travel

Window Positions:

Right Front: Open

Right Rear: Open

Left Front: Closed

Left Rear: Closed

Note: Windows will be in closed position on struck side of test vehicle and in open position on opposite side.

Amount of Stoddard Solvent In Fuel Tank:

54.1 liters (fuel tank usable capacity)

50.3 liters used in test (92% - 94% of fuel tank usable capacity)

Location of Impact Point On Test Vehicle Side To Be Impacted:

Wheelbase = 2600 millimeters

Intended impact point is 360 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 363 millimeters rearward of front axle centerline

Data Sheet 2

Test Vehicle Summary of Results

Vehicle Year/Make/Model: 2004/Suzuki/Forenza S

Body Style: 4-door

VIN: KL5JD52Z34K926166

NHTSA No.: C40508

Build Date: 09/03

Test Date: 02/18/04

Vehicle Overall Length = 4500 mm

Overall Width = 1725 mm

Vehicle Test Weight (Pre-Test):

Left Front = 437.6 kg Left Rear = 331.6 kg

Right Front = 406.0 kg Right Rear = 316.6 kg

Total Front = 843.6 kg Total Rear = 648.2 kg

Total Weight = 1491.8 kg

Wheelbase = 2600 mm

Longitudinal C.G. From Center Of Front Axle = 1131 mm

Impact Angle With Respect To Impactor = 90 degrees

Impact Point:

Actual Impact Point is 3 mm right of nominal impact ref. line (Lateral)

Actual Impact Point is 3 mm up from nominal impact point (Vertical)

Maximum Exterior Static Crush:

1. Level 1 (270 mm above ground) = 248 mm

2. Level 2 (515 mm above ground) = 356 mm

3. Level 3 (630 mm above ground) = 311 mm

4. Level 4 (880 mm above ground) = 333 mm

5. Level 5 (1375 mm above ground) = 269 mm

Maximum Post-Test Intrusion = 356 mm

Occupants:

Front Passenger

Rear Passenger

Dummy Identification 059

906

Restraints Used 3-point seat belt

3-point seat belt

Instrumentation:

Number of Vehicle Data Channels: = 21

Number of Cameras: Onboard = 3 Offboard = 8 Total = 11

Data Sheet 3

Moving Deformable Barrier(MDB) Summary

MDB Face Manufacturer And Serial Number:

Plascore, 057A1203, 075B0104

Position Of Impactor (MDB) On Monorail:

Crabbed 27° to the left

MDB Specifications:

Overall Width of Framework Carriage = 1251 mm

Overall Length of MDB (Incl. honeycomb impact face) = 4014 mm

Wheelbase of Framework Carriage = 2591 mm

Track of Framework Carriage (Front & Rear) = 1881 mm

C.G. Location Rearward of Front Axle = 1108 mm

MDB Weight:

Left Front = 411.0 kg Left Rear = 263.6 kg

Right Front = 370.0 kg Right Rear = 320.0 kg

Total Front = 781.0 kg Total Rear = 583.6 kg

Total MDB Weight = 1364.6 kg

Impact Angle (MDB C/L to Target Vehicle C/L) = 90 degrees

Impact Speed = 62.0 km/h

Maximum Static Crush of Honeycomb Impact Face:

1. Row A at Center of Bumper Level = 189 millimeters

2. Row B at Top of Bumper Level = 134 millimeters

3. Row C at Mid Level = 148 millimeters

4. Row D at Top of Stack Level = 199 millimeters

Instrumentation:

Number of MDB Data Channels = 5

Data Sheet 4

Post-Test Observations

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Visible Dummy Contact Points:

	<u>Left Front SID HIII</u>	<u>Left Rear SID HIII</u>
Head:	<u>B-pillar, seat back, D-ring attachment</u>	<u>C-pillar, header, head restraint</u>
Upper Torso:	<u>Door panel, B-pillar</u>	<u>Door panel</u>
Lower Torso:	<u>Door panel, B-pillar</u>	<u>Door panel</u>
Left Knee:	<u>Door panel</u>	<u>Door panel</u>
Right Knee:	<u>None</u>	<u>None</u>

Door Opening:

	<u>Left Side</u>	<u>Right Side</u>
Front:	<u>Jammed and latched</u>	<u>Easy</u>
Rear:	<u>Jammed and latched</u>	<u>Easy</u>

MDB Distance From Target Impact Point:

Vertical: 3 mm up from target

Horizontal: 3 mm right from target

Arm Rest Locations:

Front: 249 mm below the bottom of the window

Rear: 295 mm below the bottom of the window

Seat Movement:

Front: None

Rear: None

Glazing Damage:

Windshield: Broken

Window: Broken

Pillar Separation: No

Sill Separation: No

Other Notable Impact Effects:

None

Section 4

Occupant and Vehicle Information

Data Sheet 5

SID HIII Instrumentation Data

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

TEST NUMBER: 040218

DRIVER DUMMY SERIAL NUMBER: 059

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

HEAD ACCELERATION

LONGITUDINAL	60.0 g	@ 32.8 ms	28.4 g	@ 45.5 ms
LATERAL	136.9 g	@ 32.7 ms	13.0 g	@ 79.8 ms
VERTICAL	32.7 g	@ 63.4 ms	18.1 g	@ 35.3 ms
RESULTANT	146.6 g	@ 32.7 ms		
HIC 36	248 from 30.6 to 35.4 ms			

HEAD REDUNDANT ACCELERATION

LONGITUDINAL	60.0 g	@ 32.9 ms	24.7 g	@ 45.4 ms
LATERAL	136.4 g	@ 32.7 ms	12.9 g	@ 78.2 ms
VERTICAL	33.7 g	@ 63.4 ms	18.2 g	@ 32.8 ms
RESULTANT	146.2 g	@ 32.7 ms		
HIC 36	258 from 30.6 to 35.5 ms			

NECK FORCE

X-AXIS SHEAR	242.0 N	@ 222.8 ms	1117.9 N	@ 44.8 ms
Y-AXIS SHEAR	242.7 N	@ 43.0 ms	1631.0 N	@ 32.8 ms
Z-AXIS AXIAL	1639.4 N	@ 63.5 ms	469.9 N	@ 36.5 ms

NECK MOMENT

ABOUT X-AXIS	14.8 N-m	@ 142.8 ms	67.7 N-m	@ 86.0 ms
ABOUT Y-AXIS	34.6 N-m	@ 64.2 ms	73.0 N-m	@ 44.8 ms
ABOUT Z-AXIS	42.7 N-m	@ 53.2 ms	10.4 N-m	@ 167.4 ms
OCCIPITAL COND	11.2 N-m	@ 142.8 ms	65.1 N-m	@ 85.4 ms

LEFT UPPER RIB ACCELERATION

LATERAL (P)	74.6 g	@ 23.1 ms	20.2 g	@ 69.4 ms
LATERAL (R)	77.8 g	@ 23.1 ms	20.5 g	@ 69.4 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	55.7 g	@ 40.6 ms	15.5 g	@ 70.0 ms
LATERAL (R)	55.1 g	@ 23.1 ms	15.7 g	@ 70.0 ms
TTI d (P)	90.6			
TTI d (R)	91.7			

LOWER SPINE ACCELERATION

LATERAL (P)	106.7 g	@ 26.9 ms	22.4 g	@ 63.1 ms
LATERAL (R)	105.7 g	@ 26.9 ms	23.3 g	@ 63.1 ms

PELVIS ACCELERATION

LATERAL (P)	96.3 g	@ 23.8 ms	16.8 g	@ 61.9 ms
LATERAL (R)	96.2 g	@ 23.8 ms	16.3 g	@ 61.9 ms

POSITIVE DIRECTION

LONGITUDINAL: FORWARD
LATERAL: RIGHTWARD
VERTICAL: DOWNWARD

NEGATIVE DIRECTION

LONGITUDINAL: REARWARD
LATERAL: LEFTWARD
VERTICAL: UPWARD

Data Sheet 5 (Continued)

SID HIII Instrumentation Data

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

TEST NUMBER: 040218

PASSENGER DUMMY SERIAL NUMBER: 906

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

HEAD ACCELERATION

LONGITUDINAL	8.1 g	@ 50.1 ms	22.2 g	@ 58.0 ms
LATERAL	158.2 g	@ 52.2 ms	14.5 g	@ 67.4 ms
VERTICAL	30.2 g	@ 38.2 ms	48.6 g	@ 56.6 ms
RESULTANT	158.3 g	@ 52.2 ms		
HIC 36	958 from 48.5 to 58.2 ms			

HEAD REDUNDANT ACCELERATION

LONGITUDINAL	8.1 g	@ 48.6 ms	22.1 g	@ 58.4 ms
LATERAL	159.7 g	@ 52.2 ms	14.5 g	@ 69.1 ms
VERTICAL	30.4 g	@ 38.2 ms	49.5 g	@ 57.0 ms
RESULTANT	159.7 g	@ 52.2 ms		
HIC 36	977 from 48.5 to 58.2 ms			

NECK FORCE

X-AXIS SHEAR	764.9 N	@ 63.4 ms	162.0 N	@ 123.1 ms
Y-AXIS SHEAR	139.9 N	@ 50.9 ms	2075.4 N	@ 58.7 ms
Z-AXIS AXIAL	1246.9 N	@ 38.3 ms	1420.2 N	@ 56.0 ms

NECK MOMENT

ABOUT X-AXIS	38.2 N-m	@ 59.7 ms	115.3 N-m	@ 51.5 ms
ABOUT Y-AXIS	38.3 N-m	@ 63.7 ms	23.3 N-m	@ 74.9 ms
ABOUT Z-AXIS	9.3 N-m	@ 101.8 ms	20.9 N-m	@ 54.0 ms
OCCIPITAL COND	8.5 N-m	@ 141.7 ms	117.2 N-m	@ 51.8 ms

LEFT UPPER RIB ACCELERATION

LATERAL (P)	61.7 g	@ 38.1 ms	4.3 g	@ 85.0 ms
LATERAL (R)	60.7 g	@ 38.1 ms	4.3 g	@ 85.0 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	82.0 g	@ 36.9 ms	12.3 g	@ 63.8 ms
LATERAL (R)	79.8 g	@ 36.9 ms	12.9 g	@ 63.8 ms
TTI d (P)	74.9			
TTI d (R)	73.5			

LOWER SPINE ACCELERATION

LATERAL (P)	67.8 g	@ 38.1 ms	19.5 g	@ 60.0 ms
LATERAL (R)	67.1 g	@ 38.1 ms	20.0 g	@ 60.0 ms

PELVIS ACCELERATION

LATERAL (P)	112.9 g	@ 33.7 ms	18.0 g	@ 72.5 ms
LATERAL (R)	113.1 g	@ 33.7 ms	18.1 g	@ 72.5 ms

POSITIVE DIRECTION

LONGITUDINAL: FORWARD
LATERAL: RIGHTWARD
VERTICAL: DOWNWARD

NEGATIVE DIRECTION

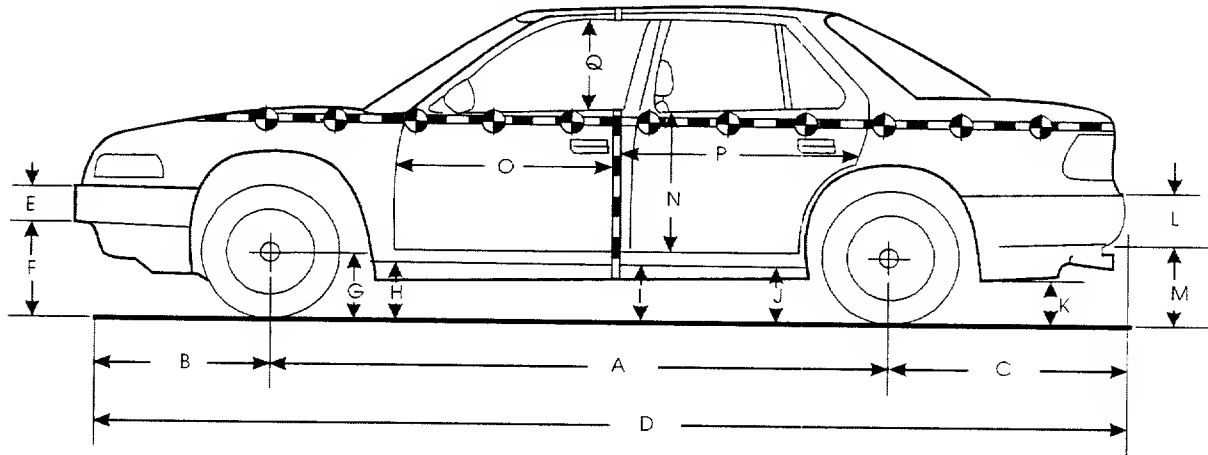
LONGITUDINAL: REARWARD
LATERAL: LEFTWARD
VERTICAL: UPWARD

Data Sheet 6

Vehicle Pre-Test And Post-Test Measurements

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



Left Side View

Note: All dimensions are in millimeters with tolerance of ± 3 mm

	Pre-Test (as delivered)	Pre-Test (as tested)	Post-Test (as tested)	Change
A	2600	2600	2562	38
B	895	895	877	18
C	1005	1005	986	19
D	4500	4500	4466	34
E	120	120	120	0
F	430	410	421	-11
G	283	275	275	0
H	284	263	284	-21
I	280	251	296	-45
J1	202	167	174	-7
J2	270	235	255	-20
K	277	230	250	-20
L	160	160	160	0
M	429	375	411	-36
N	702	702	622	80
O	670	670	640	30
P	1280	1280	1190	90
Q	405	405	390	15
R	4390	4390	4373	17
S	4390	4390	4338	52
T	1323	1323	1128	195

D = Length at centerline
T = Width at B-pillar

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

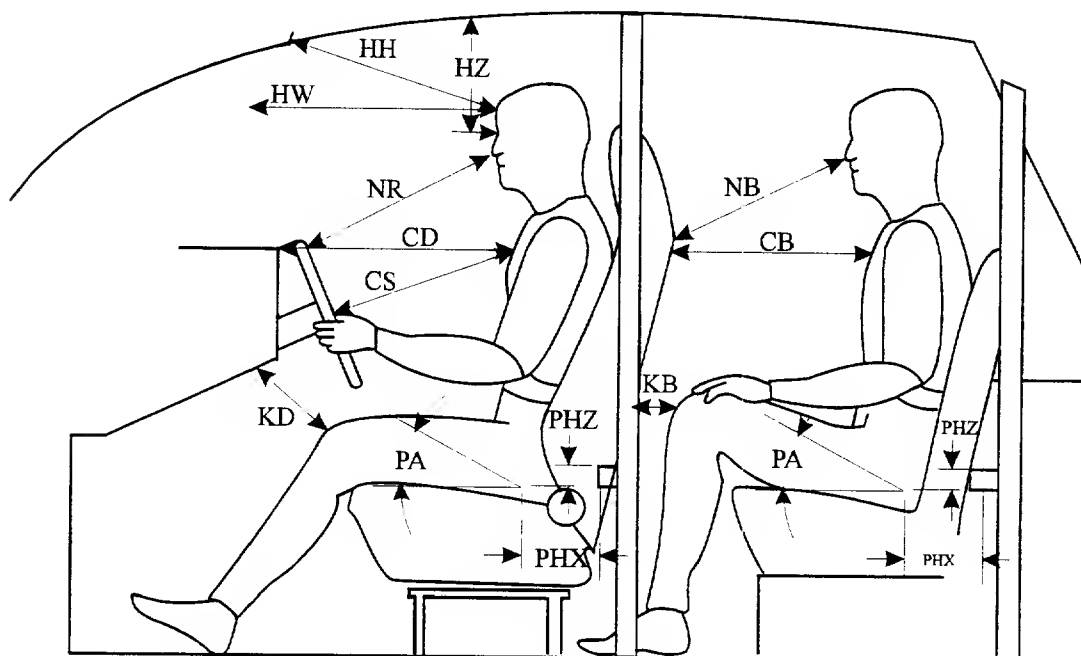
S = Left Side Length

Data Sheet 7

SID HIII Longitudinal Clearance Dimensions

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



Left Side View

Note: All measurements are in millimeters with tolerance of ± 3 mm

Measurement	Driver SID HIII # 059	Left Rear Pass. SID HIII # 906
HH	400	N/A
HW	627	N/A
HZ	178	147
NR/NB	506	585
CD/CB	574	498
CS	394	N/A
KDL(KDA°)/KBL(KBA°)	125/(30.7°)	106/(22.3°)
KDR(KDA°)/KBR(KBA°)	123/(29.8°)	109/(24.1°)
PA°	23.5°	23.4°
PHX	161	218
PHZ	138	301

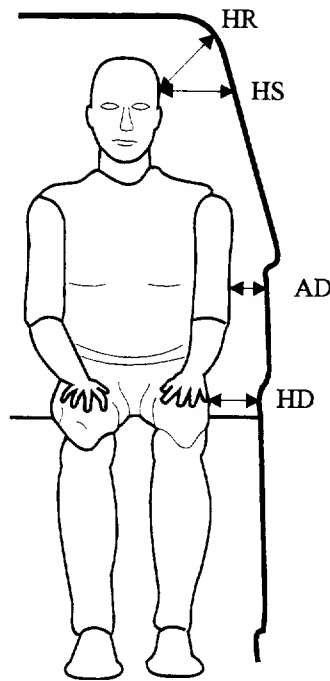
Note: 2-door vehicle shown. Rear dummy PHX and PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

Data Sheet 8

SID HIII Lateral Clearance Dimensions

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



Note: All measurements are in millimeters with tolerance of ± 3 mm

Measurement	Driver SID HIII # 059	Left Rear Pass. SID HIII # 906
HR	159	187
HS	301	238
AD*	Lower: 78 Upper: 85	Lower: 108 Upper: 102
HD	192	160

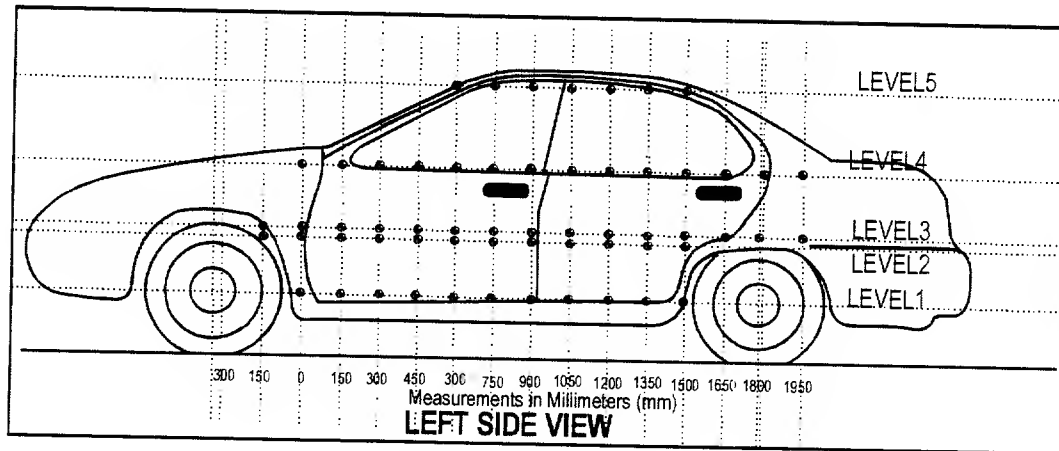
- * Lower measurement is taken laterally at center of the lower rib accelerometer height from the SID HIII arm segment to the closest part of the vehicle side.
Upper measurement is taken laterally at center of the upper rib accelerometer height from the SID HIII arm segment to the closest part of the vehicle side.

Data Sheet 9

Vehicle Side Measurements

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



Level 5 - Window Top

Level 4 - Window Sill

Level 3 - Mid-Door

Level 2 - Occupant H-Point

Level 1 - Axle Centerline Height or Sill Top Height

Measurements Are Taken When The Vehicle Is In The "As Tested" Configuration.

Measurements along the vertical 750 mm line shown above:

Level 5 @ Window Top	=	<u>1375</u>	mm
Level 4 @ Window Sill	=	<u>880</u>	mm
Level 3 @ Mid Door	=	<u>630</u>	mm
Level 2 @ Occupant H-Point	=	<u>515</u>	mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>270</u>	mm

Data Sheet 10

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Location	Height		(mm) From Impact Point													
			-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750
Level 1 Side Sill	270	Pre	---	---	---	---	---	---	---	---	687	702	698	695	695	695
		Post	---	---	---	---	---	---	---	---	740	778	852	882	892	904
		Crush	---	---	---	---	---	---	---	---	53	76	154	187	197	209
Level 2 H-Point	515	Pre	---	---	745	705	---	---	---	---	656	673	670	670	667	667
		Post	---	---	753	745	---	---	---	---	742	817	921	957	977	993
		Crush	---	---	8	40	---	---	---	---	86	144	251	287	310	326
Level 3 Mid-Door	630	Pre	---	---	736	712	672	645	---	645	668	668	663	660	658	656
		Post	---	---	757	747	710	693	---	718	757	793	889	928	944	941
		Crush	---	---	21	35	38	48	---	73	89	125	226	268	286	285
Level 4 Window Sill	880	Pre	---	---	---	805	783	765	747	737	727	718	709	700	694	687
		Post	---	---	---	818	800	788	779	771	766	774	827	888	922	928
		Crush	---	---	---	13	17	23	32	34	39	56	118	188	228	241
Level 5 Window Top	1375	Pre	---	---	---	---	---	---	---	---	---	---	---	---	---	960
		Post	---	---	---	---	---	---	---	---	---	---	---	---	---	1014
		Crush	---	---	---	---	---	---	---	---	---	---	---	---	---	54

Data Sheet 10 (Continued)

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Location	Height		(mm) From Impact Point												
			900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700
Level 1 Side Sill	270	Pre	693	692	691	689	690	690	686	---	---	---	---	---	---
		Post	921	933	939	919	870	836	783	---	---	---	---	---	---
		Crush	228	241	248	230	180	146	97	---	---	---	---	---	---
Level 2 H-Point	515	Pre	666	667	667	667	668	665	670	646	---	---	---	668	702
		Post	1004	1007	1008	1023	1024	1005	893	752	---	---	---	690	722
		Crush	338	340	341	356	356	340	223	106	---	---	---	22	20
Level 3 Mid-Door	630	Pre	655	655	653	650	650	648	653	657	640	---	648	682	696
		Post	940	948	964	N/A ¹	N/A ¹	N/A ¹	N/A ¹	865	725	---	682	705	717
		Crush	285	293	311	---	---	---	---	208	85	---	34	23	21
Level 4 Window Sill	880	Pre	680	678	680	680	685	682	684	681	690	697	703	712	725
		Post	936	946	956	974	1002	1015	962	835	739	752	747	745	750
		Crush	256	268	276	294	317	333	278	154	49	55	44	33	25
Level 5 Window Top	1375	Pre	952	950	957	957	964	956	962	968	---	---	---	---	---
		Post	1221	1046	1081	1096	1061	1034	1020	1020	---	---	---	---	---
		Crush	269	96	124	139	97	78	58	52	---	---	---	---	---

¹ Target location could not be found.

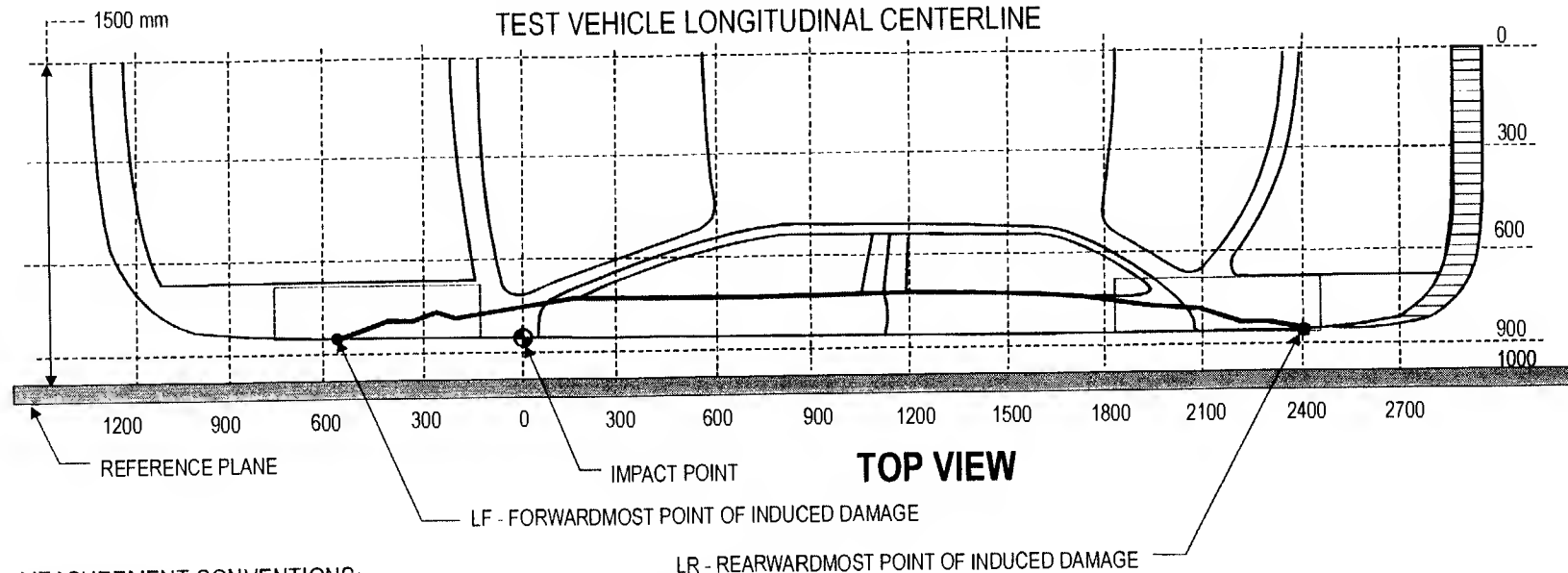
Data Sheet 11

Vehicle Damage Profile Distances

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

NOTE: All measurements are in millimeters (mm) and should be accurate to plus or minus 3mm.



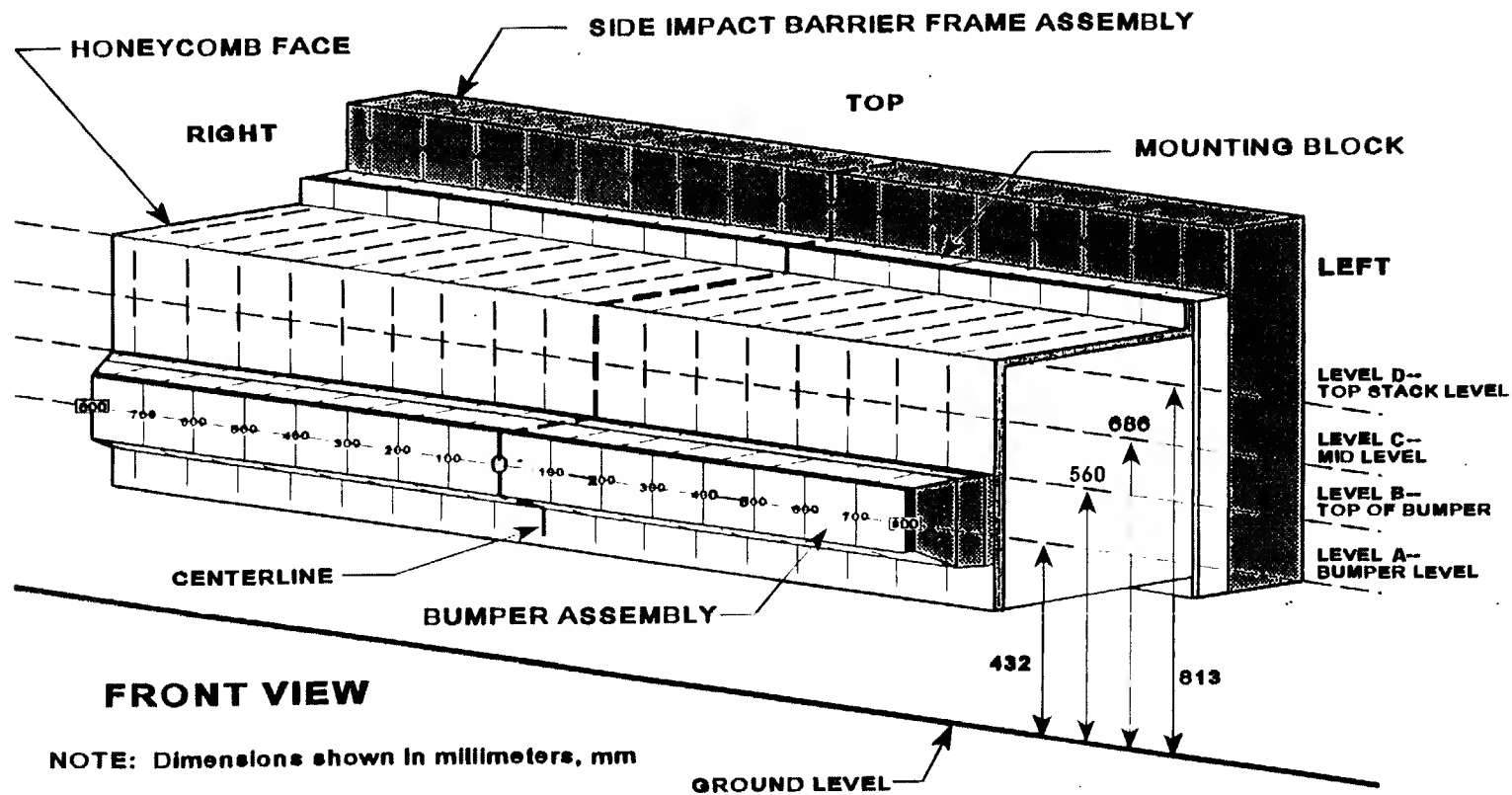
MEASUREMENT CONVENTIONS:

Forward of the impact point (towards front of vehicle) is considered negative (-)

Rearward of the impact point (towards rear end of vehicle) is considered positive (+)

DPD Measurements	Post-Test (mm)	Pre-Test (mm)	Static Crush (mm)
6: LF = -150 mm (Level 3)	718	645	73
5: 300 mm (Level 2)	921	670	251
4: 750 mm (Level 2)	993	667	326
3: 1200 mm (Level 2)	1008	667	341
2: 1650 mm (Level 2)	1005	665	340
1: LR = 2100 mm (Level 3)	725	640	85

Full length of induced damage was 2250 mm.

NHTSA No.: C40508

NOTE: Dimensions shown in millimeters, mm

GROUND LEVEL

4-11

040218

Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Location	Height At CL	Distance Right of Center (mm)										Distance Left of Center (mm)							
		800	700	600	500	400	300	200	100	0		100	200	300	400	500	600	700	800
Top Stack Level - Level D	814	-25	14	16	11	3	-13	-22	-19	-20	-17	-19	-23	-34	-63	-104	-157	-199	
Mid Level Level C	685	-27	8	7	3	-1	-5	-17	-9	-10	-14	-17	-21	-27	-42	-67	-124	-148	
Top Bumper Level - Level B	560	-42	-28	-21	-17	-16	-23	-24	-27	-33	-39	-46	-55	-64	-76	-94	-120	-134	
Mid Bumper Level - Level A	432	-84	-67	-54	-45	-44	-51	-49	-51	-53	-60	-68	-77	-85	-101	-125	-164	-189	

All measurements are in millimeters and have a tolerance of ± 3 mm.

Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

Deformable Barrier Face Profile

NHTSA No.: C40508

Level D - Top Stack

Pre-Test

Index	Xmm	Ymm	Zmm
1	-377	800	-38
2	-378	699	-39
3	-378	599	-39
4	-378	500	-40
5	-379	400	-41
6	-379	299	-41
7	-380	199	-42
8	-380	99	-42
9	-380	-1	-43
10	-380	-101	-44
11	-380	-201	-44
12	-381	-301	-45
13	-381	-401	-45
14	-382	-501	-46
15	-382	-601	-47
16	-382	-701	-47
17	-384	-801	-48

Post-Test

Index	Xmm	Ymm	Zmm
1	-352	764	-80
2	-392	673	-81
3	-394	574	-80
4	-389	474	-79
5	-382	375	-78
6	-366	276	-77
7	-357	175	-76
8	-361	76	-74
9	-360	-24	-74
10	-364	-124	-72
11	-362	-224	-70
12	-358	-325	-69
13	-348	-424	-66
14	-318	-519	-67
15	-278	-610	-70
16	-225	-692	-74
17	-185	-779	-73

Difference

Index	Xmm	Ymm	Zmm
1	-25	36	43
2	14	27	43
3	16	26	41
4	11	25	39
5	3	25	37
6	-13	24	36
7	-22	24	34
8	-19	24	32
9	-20	24	31
10	-17	24	28
11	-19	24	26
12	-23	24	24
13	-34	22	21
14	-63	18	21
15	-104	9	23
16	-157	-9	27
17	-199	-22	25

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C40508

Level C - Mid Level

Pre-Test

Index	Xmm	Ymm	Zmm
18	-378	801	-166
19	-379	701	-166
20	-379	601	-167
21	-379	501	-168
22	-379	401	-169
23	-379	301	-170
24	-380	201	-170
25	-381	100	-171
26	-381	0	-172
27	-381	-100	-172
28	-381	-200	-173
29	-382	-300	-174
30	-381	-400	-174
31	-382	-500	-175
32	-382	-600	-175
33	-384	-700	-176
34	-384	-800	-176

Post-Test

Index	Xmm	Ymm	Zmm
18	-351	763	-207
19	-387	673	-208
20	-386	574	-207
21	-382	473	-207
22	-378	374	-205
23	-374	273	-205
24	-364	174	-204
25	-372	74	-202
26	-371	-26	-201
27	-367	-127	-198
28	-365	-227	-197
29	-361	-327	-195
30	-355	-428	-194
31	-340	-527	-192
32	-315	-624	-191
33	-259	-707	-197
34	-236	-801	-188

Difference

Index	Xmm	Ymm	Zmm
18	-27	39	41
19	8	28	42
20	7	27	40
21	3	27	38
22	-1	27	37
23	-5	27	36
24	-17	27	33
25	-9	27	31
26	-10	27	29
27	-14	26	26
28	-17	27	24
29	-21	27	22
30	-27	27	20
31	-42	27	17
32	-67	24	16
33	-124	7	21
34	-148	1	12

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C40508

Level B - Top of Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
35	-379	801	-291
36	-379	702	-292
37	-380	602	-293
38	-380	502	-294
39	-380	402	-294
40	-380	302	-295
41	-381	202	-296
42	-382	102	-296
43	-381	2	-297
44	-382	-99	-297
45	-382	-199	-298
46	-382	-299	-299
47	-383	-399	-299
48	-383	-499	-300
49	-384	-599	-300
50	-384	-699	-301
51	-384	-799	-302

Post-Test

Index	Xmm	Ymm	Zmm
35	-337	770	-323
36	-351	672	-324
37	-359	572	-326
38	-363	472	-327
39	-364	372	-325
40	-358	273	-321
41	-358	172	-322
42	-356	73	-321
43	-349	-27	-317
44	-343	-127	-316
45	-336	-227	-313
46	-327	-327	-310
47	-319	-426	-308
48	-307	-525	-306
49	-289	-624	-303
50	-263	-721	-298
51	-250	-820	-308

Difference

Index	Xmm	Ymm	Zmm
35	-42	31	32
36	-28	30	32
37	-21	30	34
38	-17	30	33
39	-16	30	31
40	-23	29	27
41	-24	29	26
42	-27	29	25
43	-33	29	20
44	-39	28	18
45	-46	28	15
46	-55	27	12
47	-64	27	9
48	-76	26	6
49	-94	25	3
50	-120	22	-3
51	-134	21	6

Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

Deformable Barrier Face Profile Cont'd.

NIITSA No.: C40508

Level A - Mid Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
52	-472	806	-418
53	-483	709	-418
54	-484	608	-419
55	-484	509	-420
56	-485	409	-421
57	-485	308	-421
58	-485	208	-421
59	-486	109	-422
60	-486	8	-423
61	-486	-91	-424
62	-486	-192	-424
63	-487	-292	-425
64	-487	-392	-426
65	-487	-492	-426
66	-487	-592	-427
67	-487	-692	-428
68	-479	-790	-428

Post-Test

Index	Xmm	Ymm	Zmm
52	-388	762	-458
53	-416	668	-460
54	-430	569	-459
55	-439	469	-458
56	-441	369	-457
57	-434	269	-455
58	-436	169	-453
59	-434	69	-451
60	-433	-31	-450
61	-426	-130	-448
62	-418	-230	-446
63	-410	-330	-444
64	-402	-430	-441
65	-386	-529	-438
66	-362	-626	-435
67	-323	-718	-431
68	-290	-812	-428

Difference

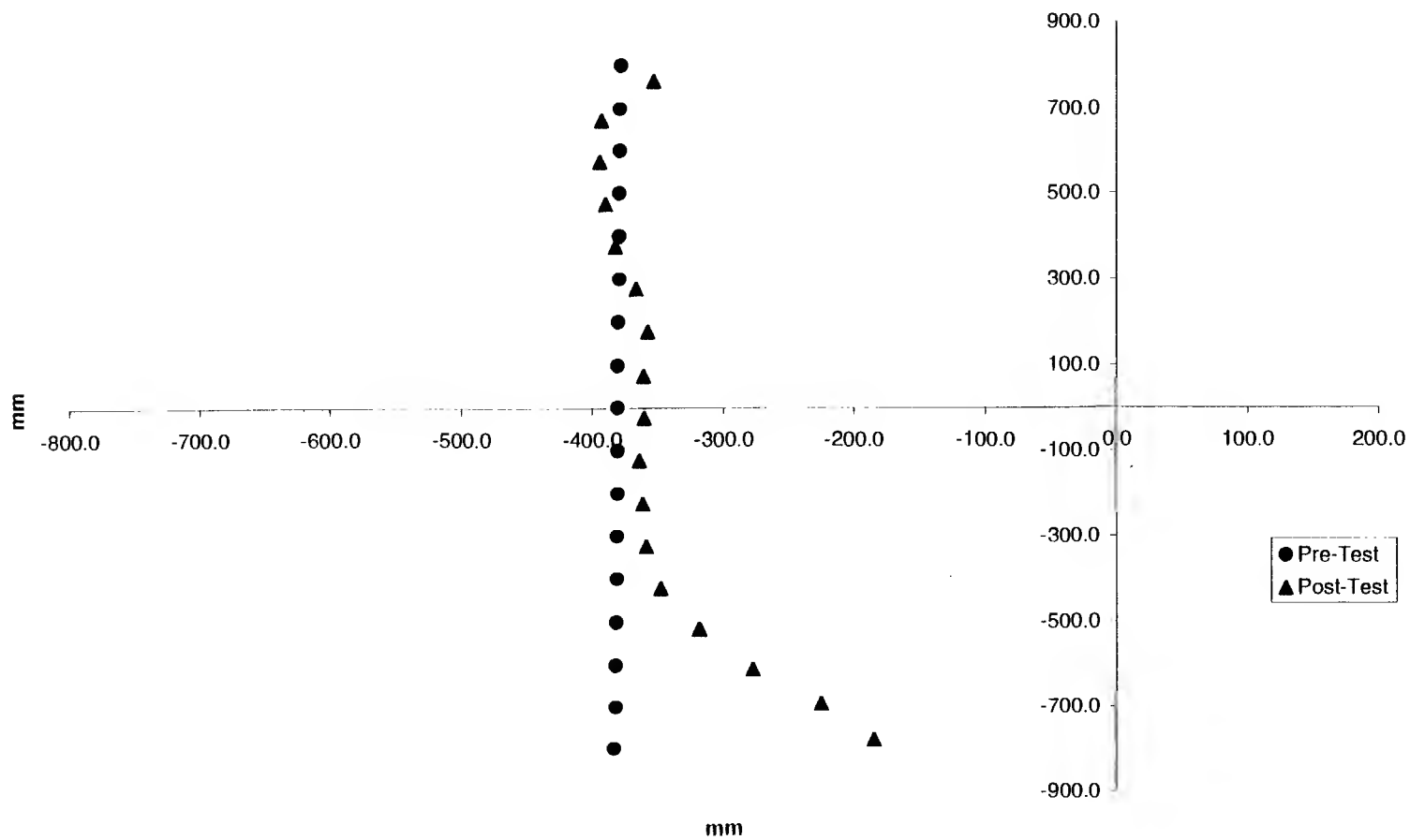
Index	Xmm	Ymm	Zmm
52	-84	44	40
53	-67	41	42
54	-54	40	41
55	-45	39	39
56	-44	40	36
57	-51	39	34
58	-49	39	31
59	-51	39	28
60	-53	39	26
61	-60	39	24
62	-68	38	21
63	-77	38	18
64	-85	38	16
65	-101	37	12
66	-125	34	8
67	-164	26	4
68	-189	21	-1

Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Level D - Deformable Barrier Face Profile 1-17

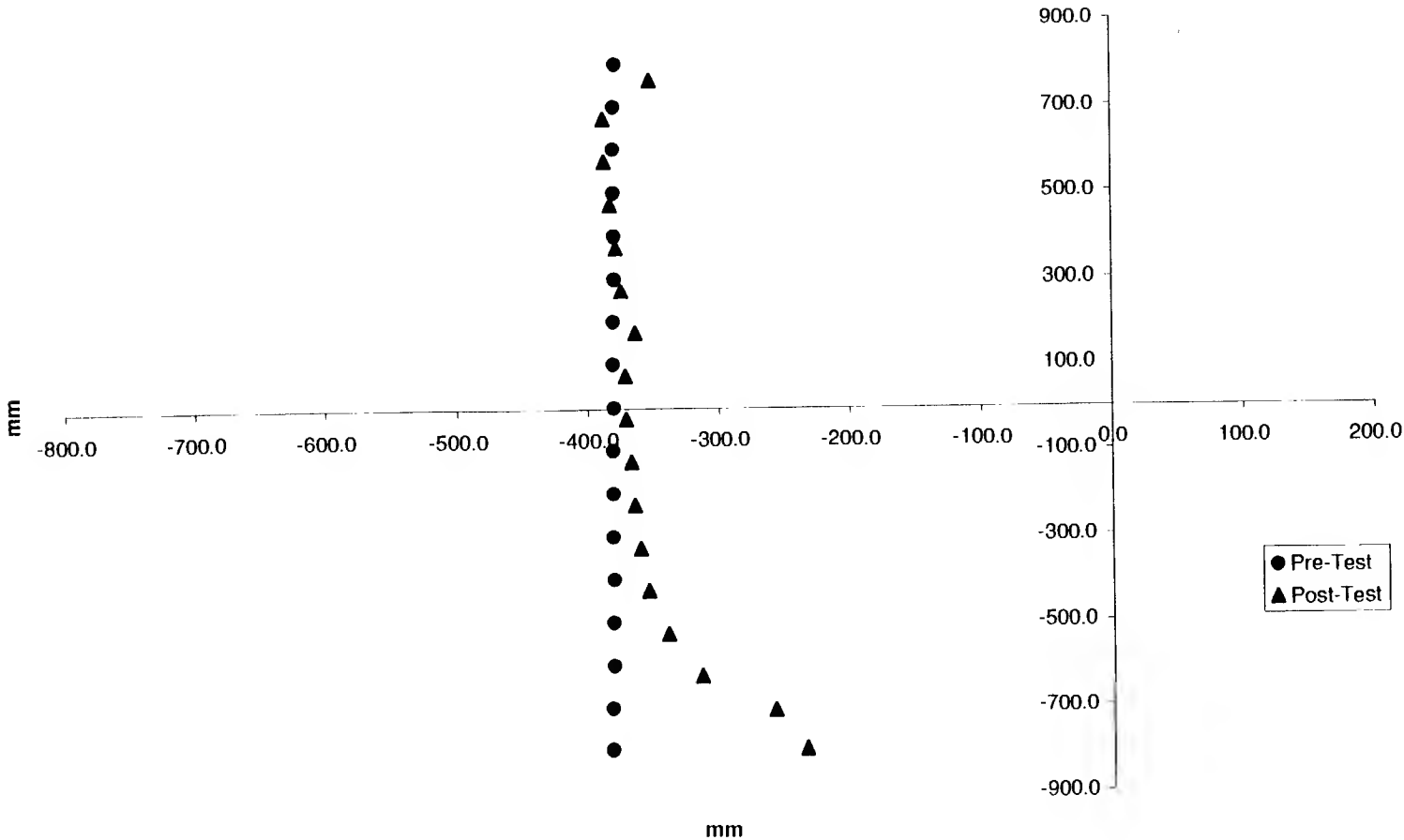


Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Level C - Deformable Barrier Face Profile 18-34



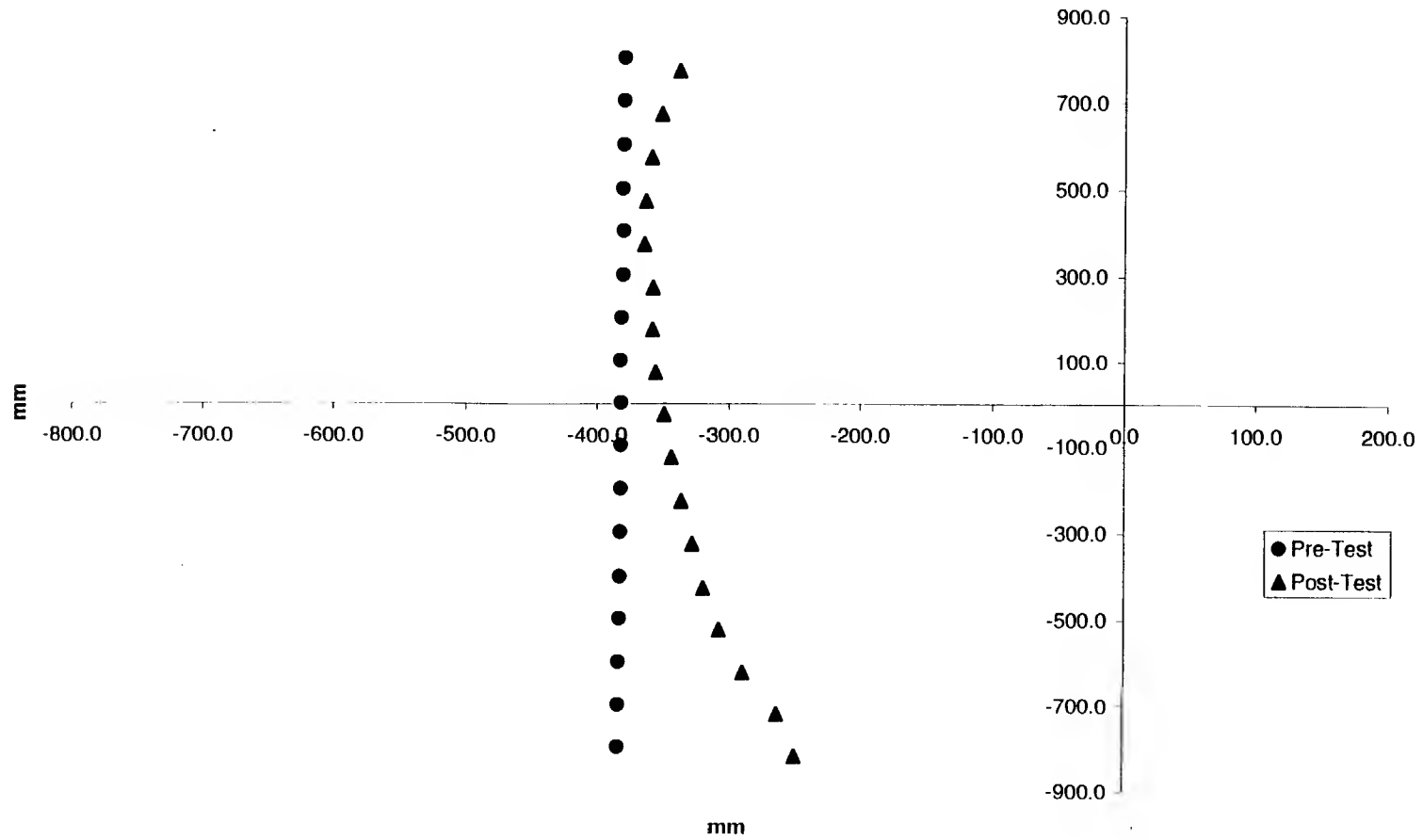
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Level B - Deformable Barrier Face Profile 35-51

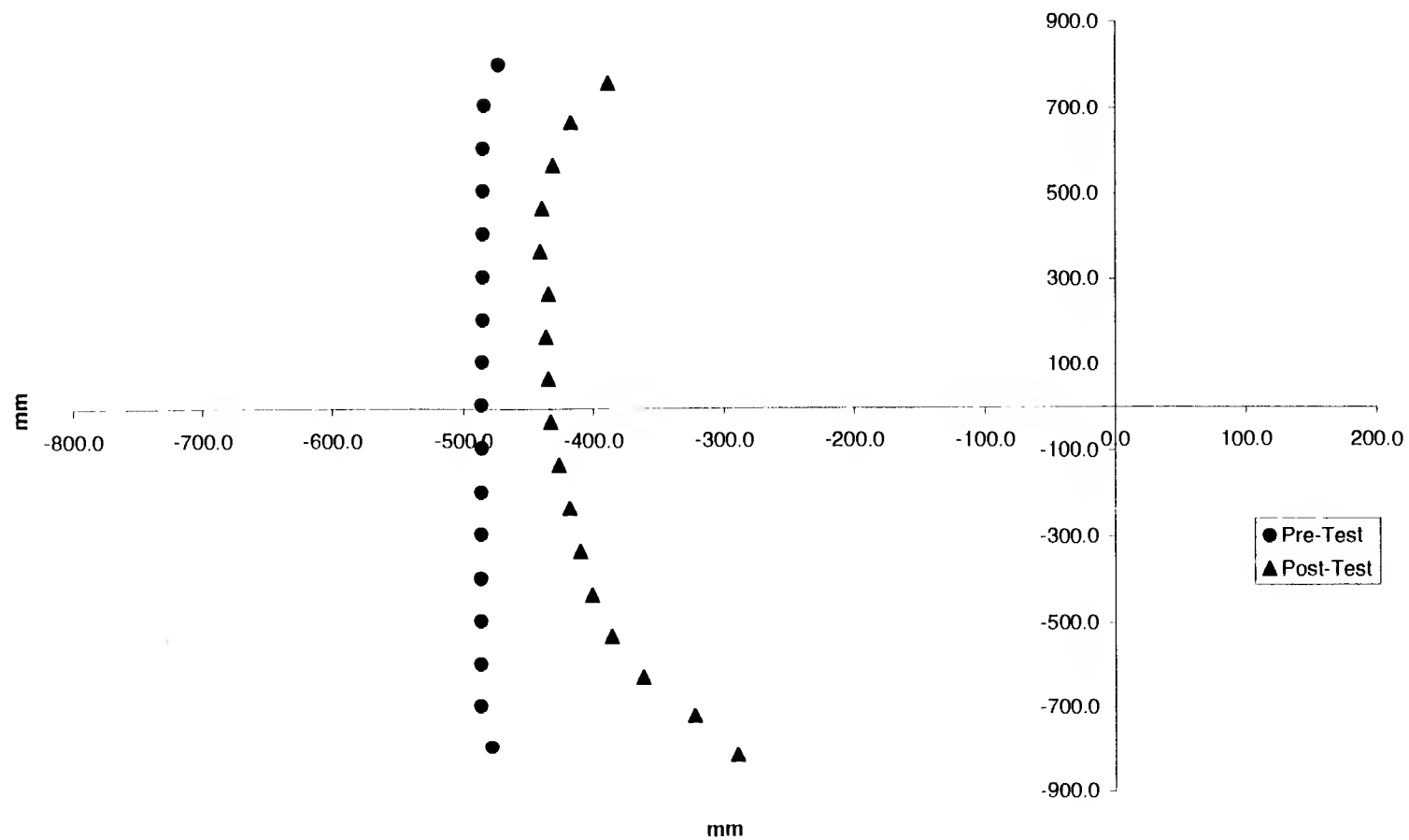


Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

Level A - Deformable Barrier Face Profile 52-68

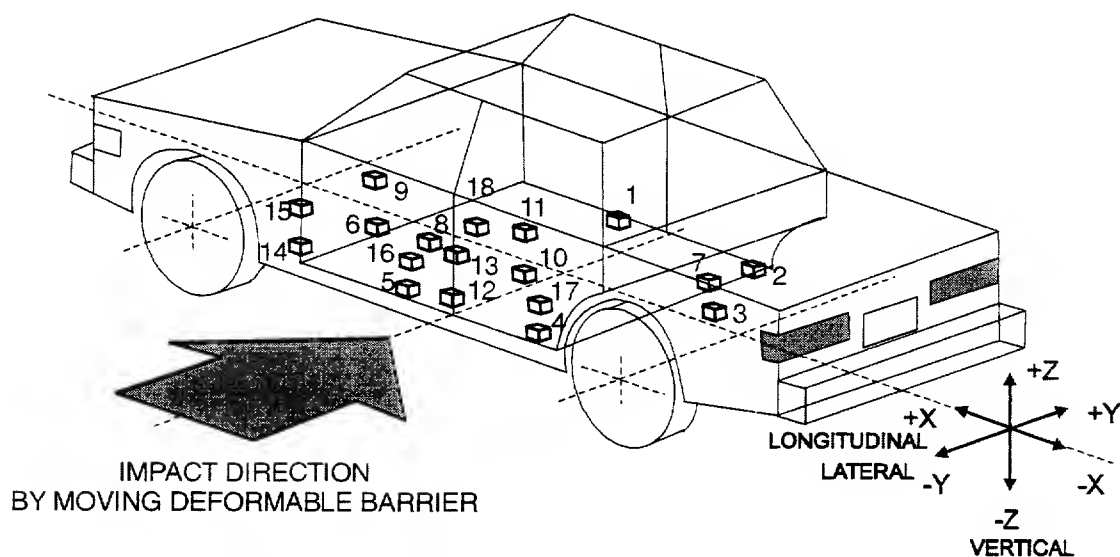


Data Sheet 13

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



- 1-Right Front Side Sill
- 2-Right Side Sill at Rear Seat
- 3-Rear Floorpan above Axle
- 4-Left Side Sill at Rear Seat
- 5-Left Front Side Sill
- 6-Left Front Door on Centerline
- 7-Right Rear Occupant Compartment
- 8-Left Front Door Mid Rear
- 9-Left Front Door Upper Centerline

- 10-Left Rear Door Mid Rear
- 11-Left Rear Door Upper Centerline
- 12-Left Side Lower B-pillar
- 13-Left Side Middle B-pillar
- 14-Left Side Lower A-pillar
- 15-Left Side Middle A-pillar
- 16-Left Side Front Seat Track at H-point
- 17-Left Rear Seat Track at H-point
- 18-Vehicle Center of Gravity

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data SummaryVehicle: 2004 Suzuki Forenza S 4-doorNHTSA No.: C40508TEST NUMBER: 040218
No. LOCATION

X

Y

Z

POSITIVE
DIRECTIONNEGATIVE
DIRECTION

1 RIGHT SIDE SILL AT FRONT SEAT	2954 mm	640 mm	-279 mm				
LONGITUDINAL				2.2 g	@ 29.1 ms	5.6 g	@ 12.5 ms
LATERAL				19.1 g	@ 16.0 ms	2.3 g	@ 159.4 ms
VERTICAL				2.7 g	@ 132.4 ms	7.4 g	@ 17.5 ms
RESULTANT				20.8 g	@ 16.1 ms		
2 RIGHT SIDE SILL AT REAR SEAT	1934 mm	650 mm	-254 mm				
LONGITUDINAL				3.5 g	@ 29.6 ms	6.1 g	@ 12.8 ms
LATERAL				24.7 g	@ 33.3 ms	5.1 g	@ 158.6 ms
VERTICAL				5.0 g	@ 33.5 ms	9.2 g	@ 22.7 ms
RESULTANT				25.4 g	@ 33.3 ms		
3 REAR FLOORPAN ABOVE AXLE	1576 mm	85 mm	-375 mm				
LONGITUDINAL				5.3 g	@ 47.0 ms	14.2 g	@ 16.0 ms
LATERAL				27.5 g	@ 31.4 ms	2.6 g	@ 299.0 ms
VERTICAL				9.9 g	@ 33.6 ms	9.7 g	@ 39.5 ms
RESULTANT				28.0 g	@ 31.7 ms		
4 LEFT SIDE SILL AT REAR SEAT	1934 mm	-650 mm	-312 mm				
LATERAL				85.5 g	@ 13.1 ms	40.0 g	@ 23.8 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

TEST NUMBER: 040218

No. LOCATION	X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
5 LEFT SIDE SILL AT FRONT SEAT LATERAL	2944 mm	-640 mm	-263 mm	41.2 g	@ 9.8 ms	20.2 g	@ 16.7 ms
7 RIGHT REAR OCCUPANT COMPARTMENT LATERAL	1782 mm	350 mm	-341 mm	24.2 g	@ 33.4 ms	2.9 g	@ 159.7 ms
12 LEFT LOWER B-POST LATERAL	2082 mm	-692 mm	-401 mm	252.3 g	@ 3.9 ms	103.1 g	@ 12.0 ms
13 LEFT MIDDLE B-POST LATERAL	2075 mm	-691 mm	-856 mm	132.9 g	@ 4.6 ms	31.9 g	@ 26.5 ms
14 LEFT LOWER A-POST LATERAL	3010 mm	-720 mm	-365 mm	99.8 g	@ 3.4 ms	45.4 g	@ 13.0 ms
15 LEFT MIDDLE A-POST LATERAL ¹	3035 mm	-700 mm	-647 mm	---	---	---	---
16 LEFT FRONT SEAT TRACK LATERAL	2385 mm	-555 mm	-279 mm	40.3 g	@ 13.0 ms	17.8 g	@ 43.4 ms
17 LEFT REAR SEAT TRACK LATERAL ¹	1445 mm	-620 mm	-359 mm	85.7 g	@ 24.7 ms	110.1 g	@ 19.3 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508

TEST NUMBER: 040218 No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
18 VEHICLE CENTER OF GRAVITY	2430 mm	0 mm	-370 mm		
LONGITUDINAL			53.5 g	@ 18.6 ms	60.4 g @ 23.5 ms
LATERAL			179.0 g	@ 19.3 ms	116.1 g @ 27.0 ms
VERTICAL			42.5 g	@ 22.0 ms	75.1 g @ 26.2 ms
RESULTANT			185.7 g	@ 19.2 ms	

REFERENCE: X: + FORWARD FROM REAR BUMPER
Y: + RIGHTWARD FROM VEHICLE CENTERLINE
Z: + DOWNWARD FROM GROUND LEVEL

For acceleration data sign convention see Report Sign Convention in Appendix D.

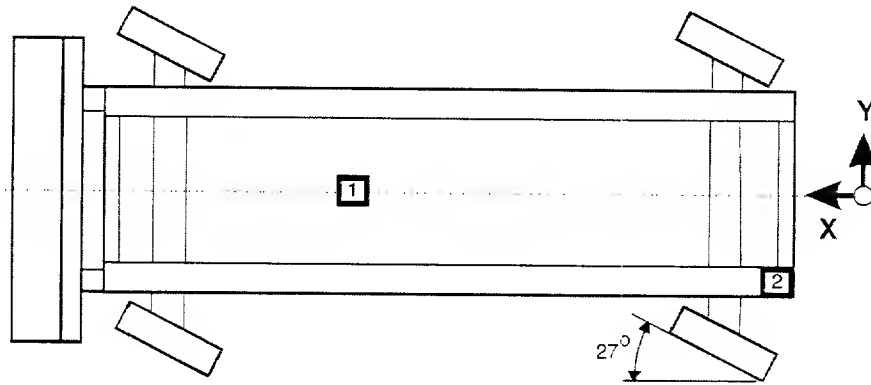
¹ See DATA ACQUISITION EXPLANATIONS on page 2-3

Data Sheet 14

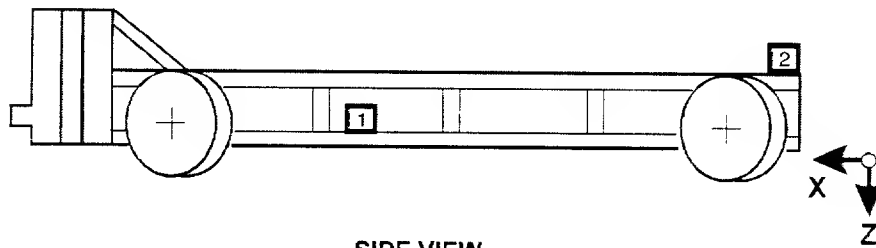
MDB Accelerometer Locations and Data Summary

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



TOP VIEW



SIDE VIEW

Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	MDB Center of Gravity	1855	0	-520				
	Longitudinal X				1.6	14.0	21.4	31.4
	Lateral Y				3.7	57.8	10.1	29.0
	Vertical Z				4.2	53.7	4.8	32.9
	Resultant R				23.2	31.4		
2	Rear Frame Member	412	-677	-625				
	Longitudinal X				2.0	136.6	24.5	31.0
	Lateral Y				4.5	23.7	1.2	154.0

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

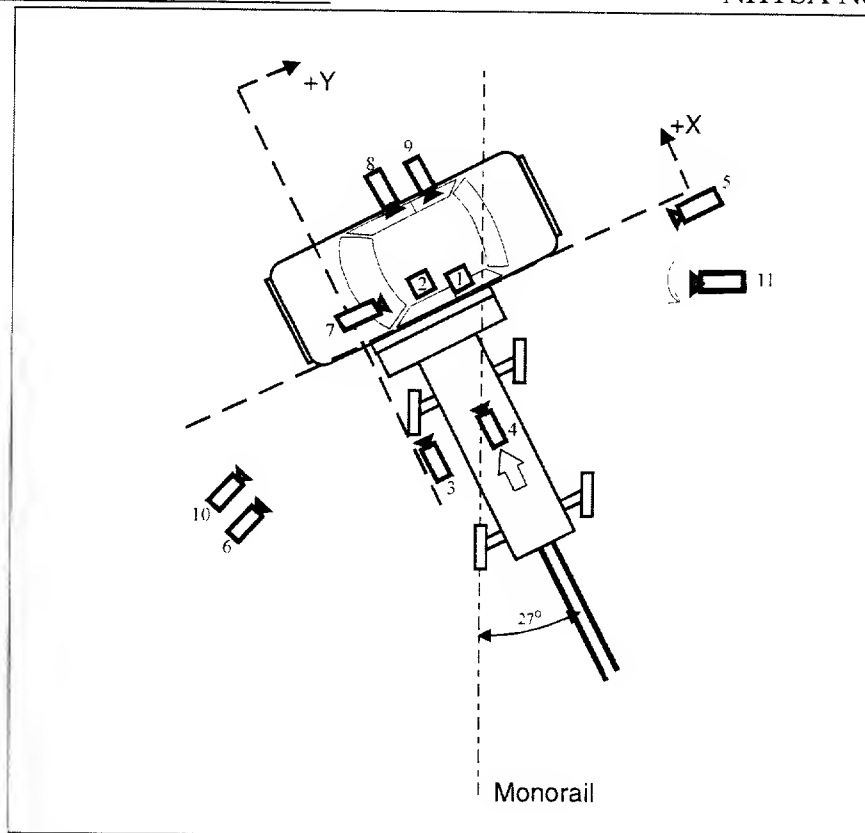
All measurements accurate to within ± 3 mm.

Data Sheet 15

High-Speed Camera Locations and Data Summary

Vehicle: 2004 Suzuki Forenza S 4-door

NHTSA No.: C40508



Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Overhead wide	250	2150	-5750	-80.3	8.5	1020
2	Overhead tight	370	1800	-5750	-86.6	25	N/A ¹
3	Onboard MDB left side	-1750	-40	-720	-0.1	13	997
4	Onboard MDB center	-2480	830	-1353	-5.5	25	1022
5	Right side of MDB	330	10120	-930	-1.7	13	1002
6	Left side of MDB	-2200	4720	-1040	-1.5	13	1015
7	Onboard vehicle front	580	-670	-1180	-4.3	8	1015
8	Onboard side front door	1570	760	-1020	0.4	8	1010
9	Onboard side rear door	1630	1750	-1050	3.9	8	662
10	Digital overall event	-2470	-4370	-990	-1.3	13	1000
11	Real-time Panning-Video	N/A	N/A	N/A	N/A	Zoom	30

+X: Forward (referenced to MDB) from impact point

+Y: Rightward (referenced to MDB) from impact point

+Z: Downward from ground level

¹ Camera did not run.

Section 5

Vehicle Fuel System Integrity

Data Sheet 16

FMVSS 301 Fuel System Integrity Data

NHTSA No.: C40508

Test Date: 02/18/04

Vehicle Year/Make/Model/Body Style: 2004 Suzuki Forenza S 4-door

Test Vehicle Impact Type :

- ☐ Frontal (48.28 km/h)
☐ Oblique (48.28 km/h) with ____° barrier face
first contacting the (driver/passenger) side
☐ Rear Moving Barrier (48.28 km/h)
☐ Lateral Moving Barrier (32.19 km/h)
☒ Side Impact Moving Deformable Barrier
(62.0 km/h) contacting the Driver's side

Fuel Spillage Measurement:

1. From impact until vehicle motion ceases
2. For five-minute period after vehicle motion ceases
3. For next 25 minutes.

Actual	Maximum Allowed
0 g	28 g
0 g	142 g
0 g	28 g/1 minute

Solvent Spillage Details :

No rollover test performed - See Data Acquisition Explanations

Appendix A

Photographs

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Figure A-5 Pre-Test Rear View of Test Vehicle

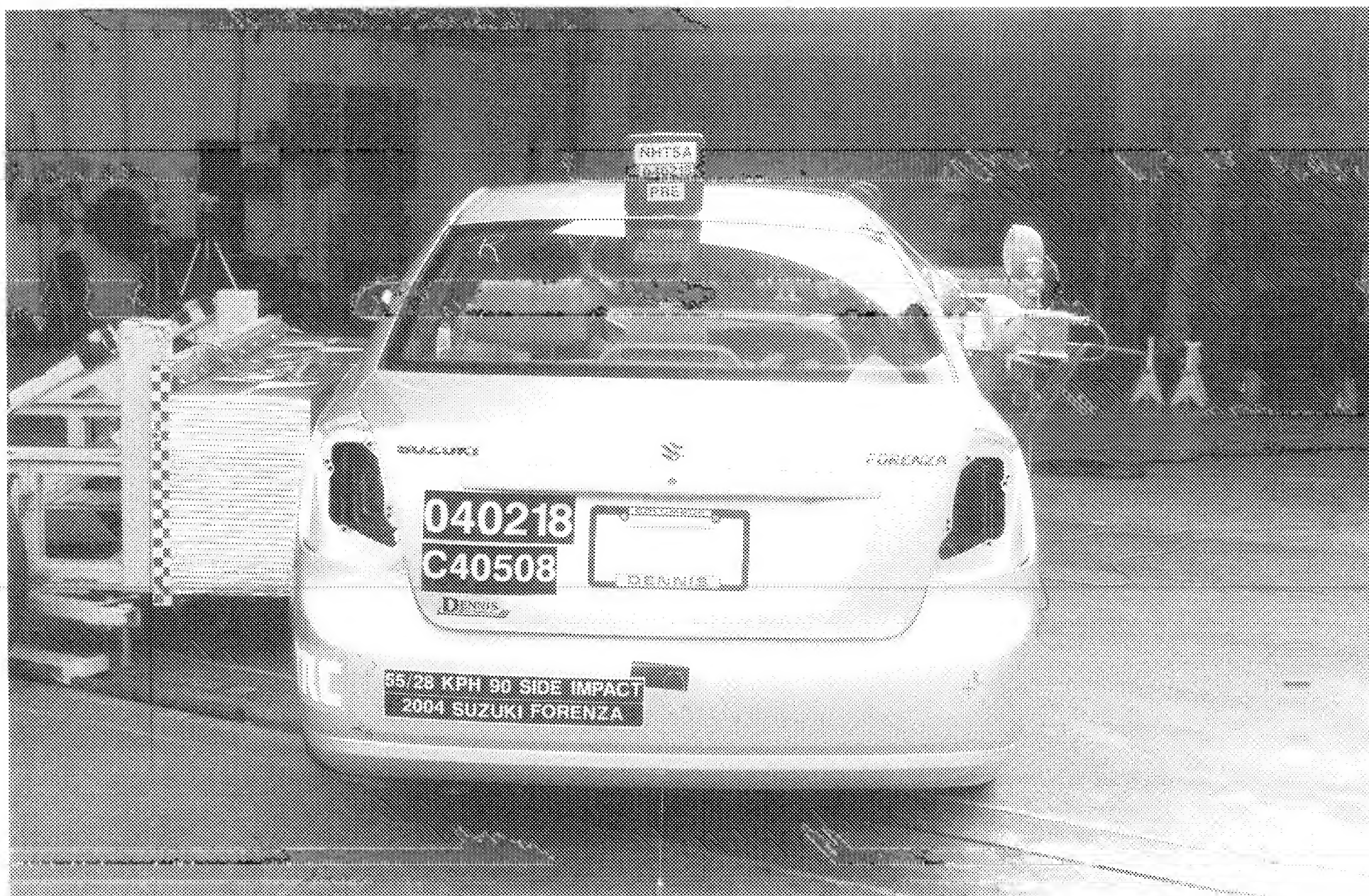




Figure A-6 Post-Test Rear View of Test Vehicle
A-9

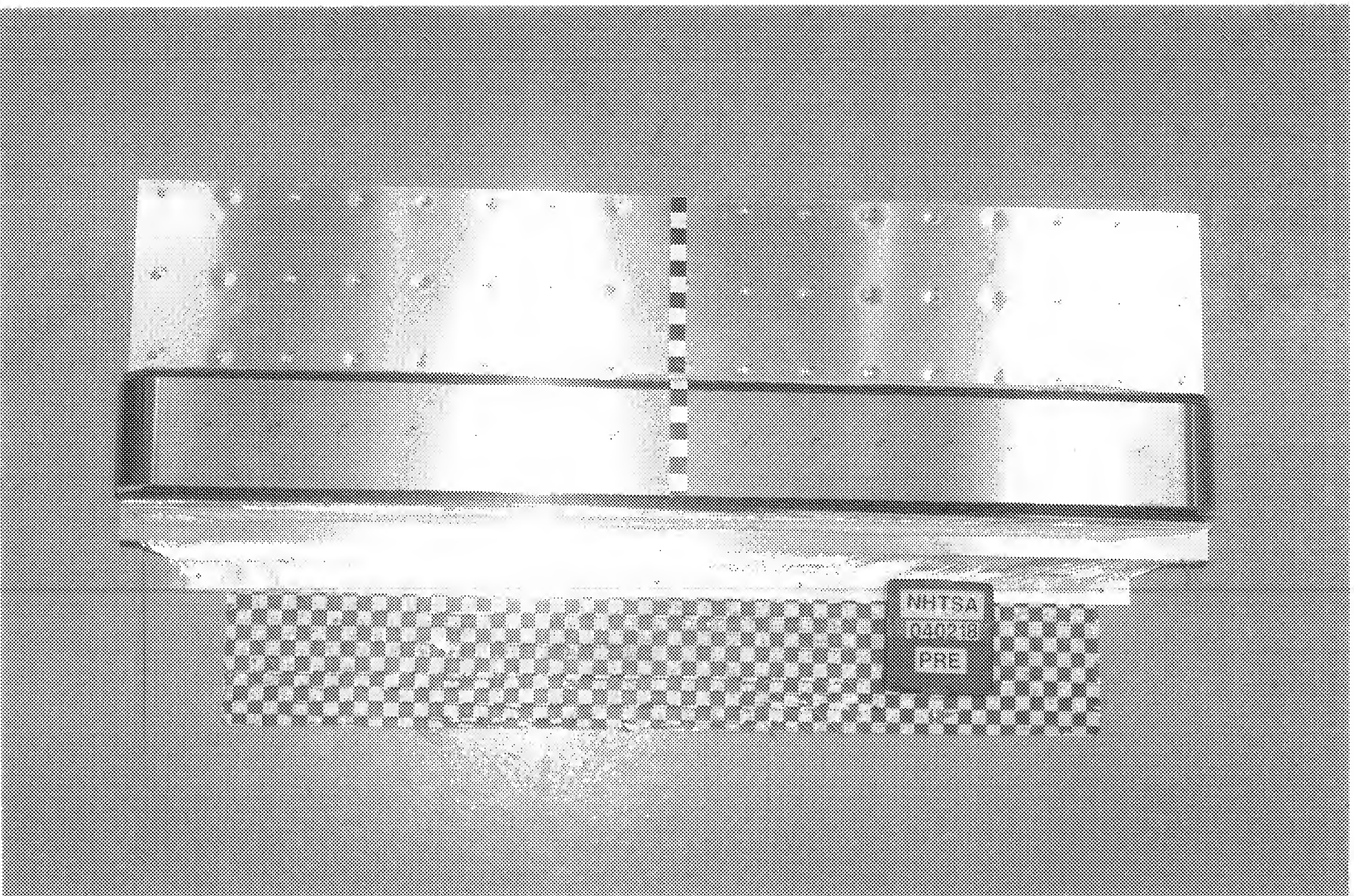


Figure A-7 Pre-Test Frontal View of Impactor Face

A-10

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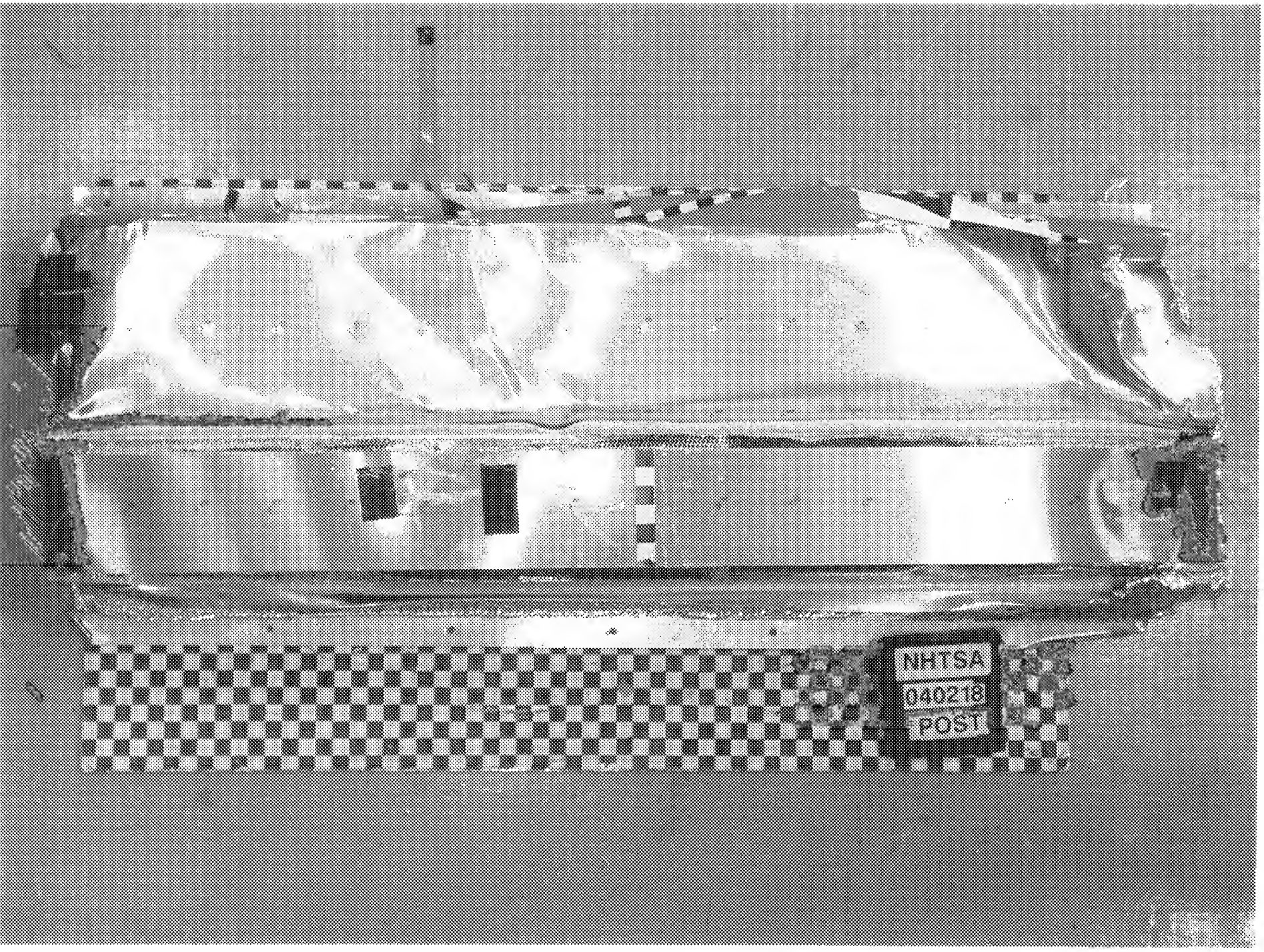


Figure A-8 Post-Test Frontal View of Impactor Face

A-11

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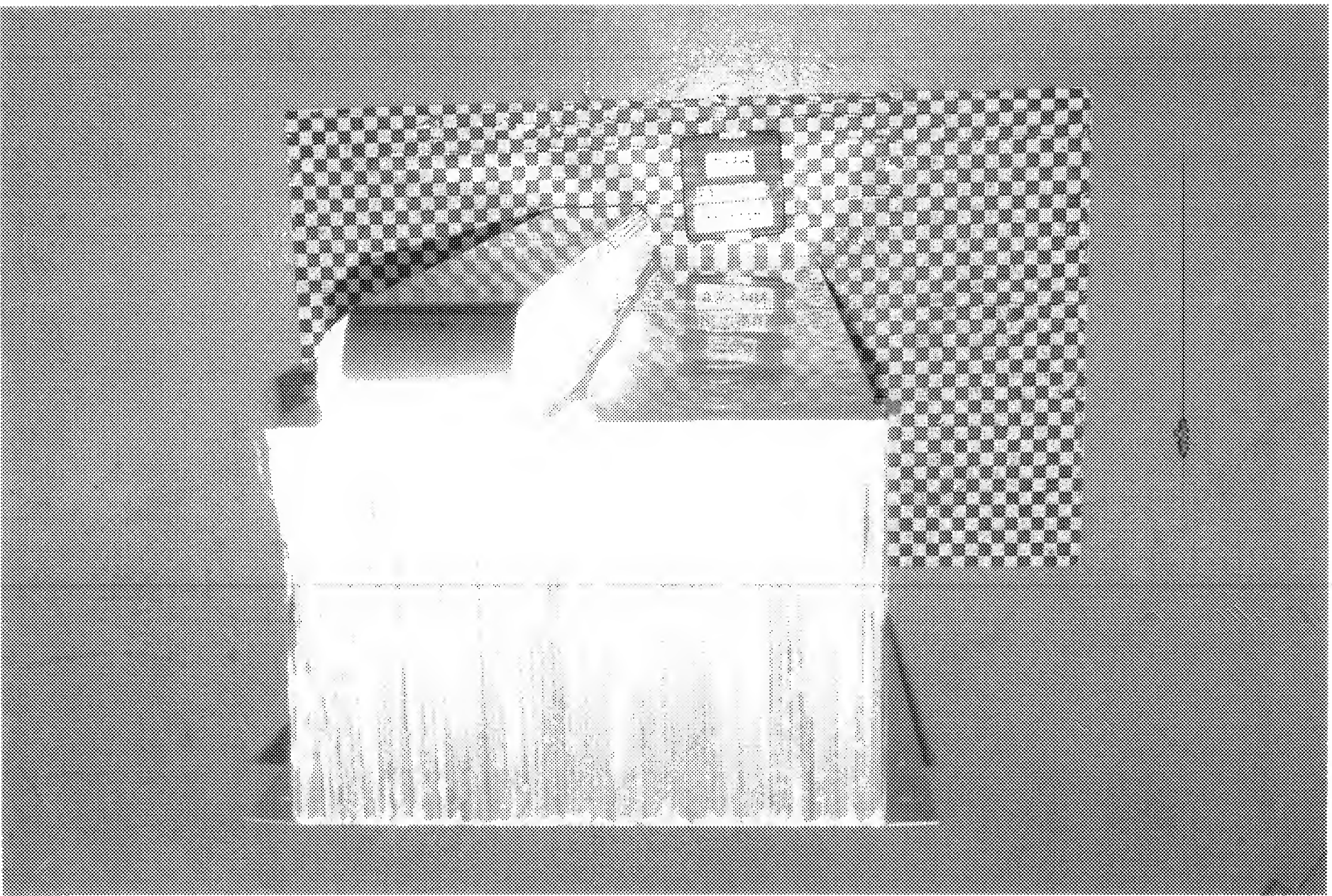


Figure A-9 Pre-Test Left Side View of Impactor Face
A-12

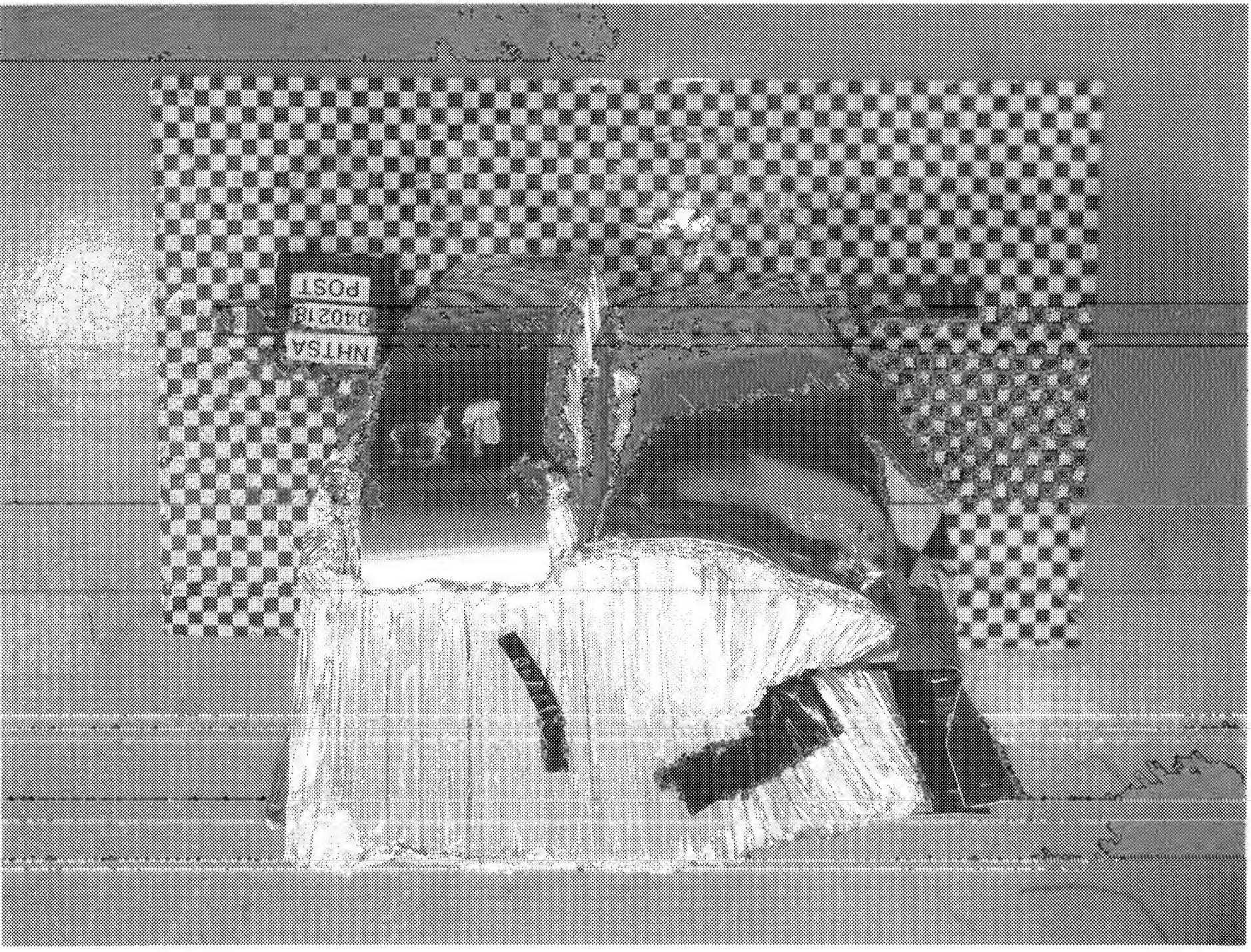


Figure A-10 Post-Test Left Side View of Impactor Face
A-13

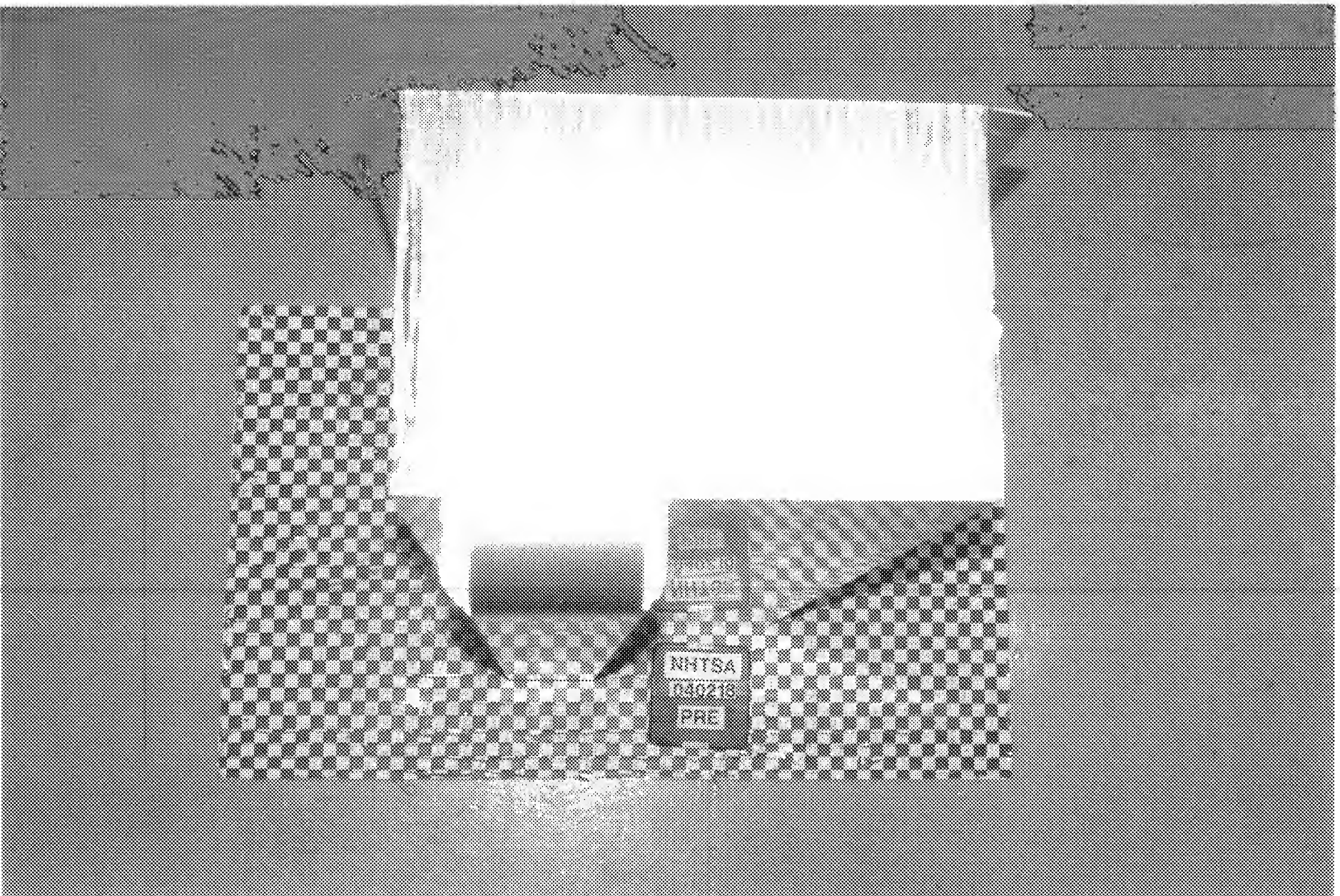


Figure A-11 Pre-Test Right Side View of Impactor Face
A-14

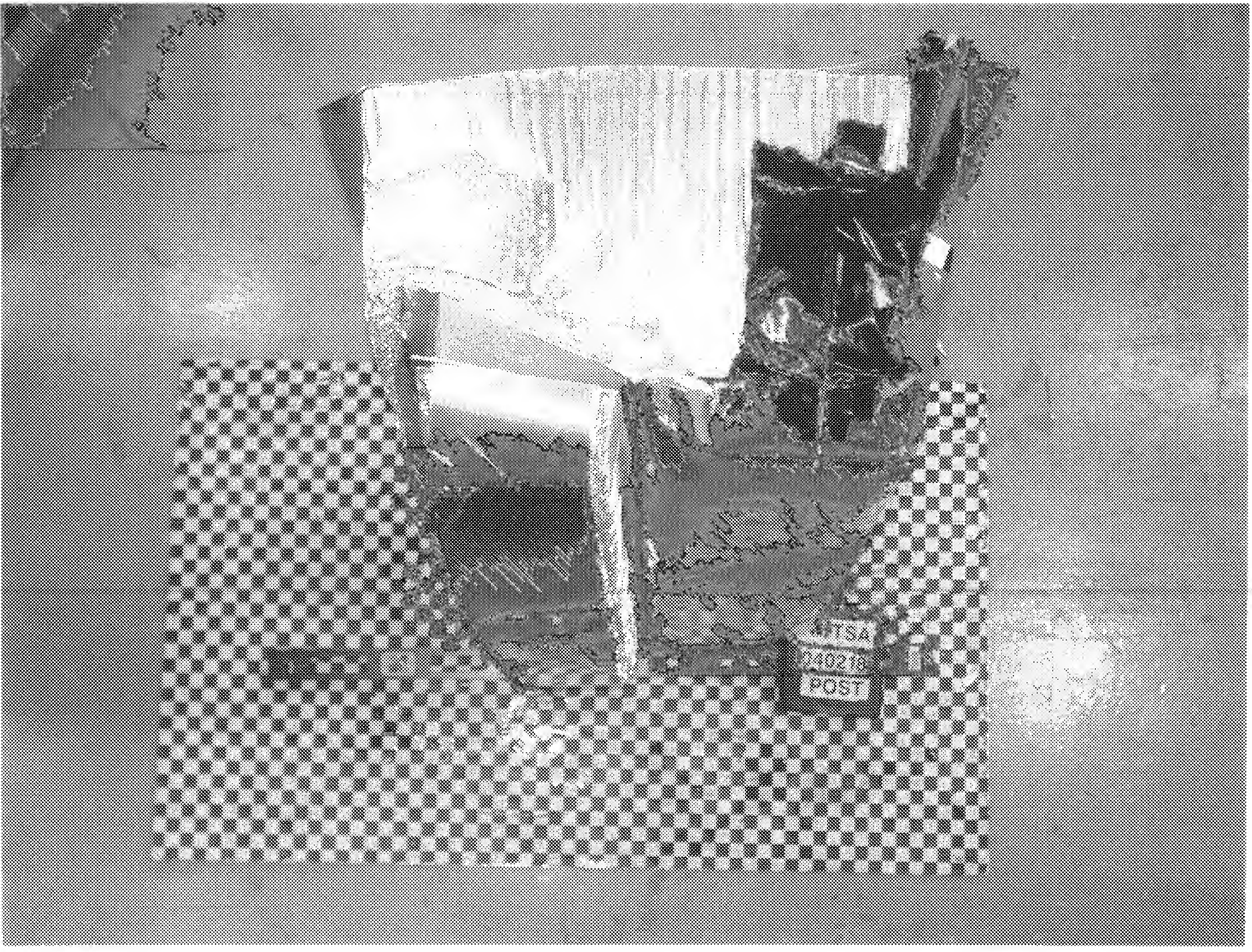


Figure A-12 Post-Test Right Side View of Impactor Face
A-15

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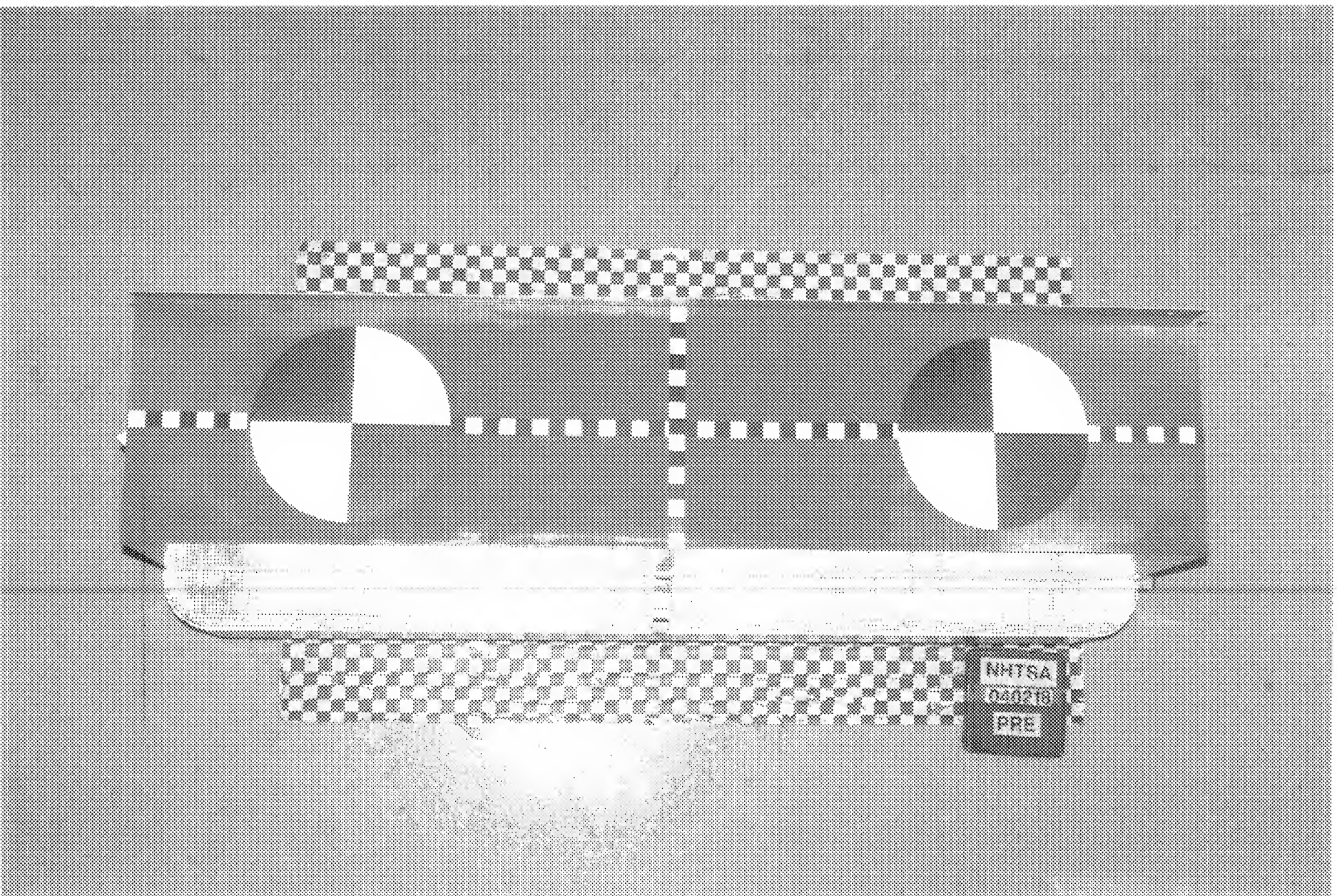


Figure A-13 Pre-Test Top View of Impactor Face

A-16

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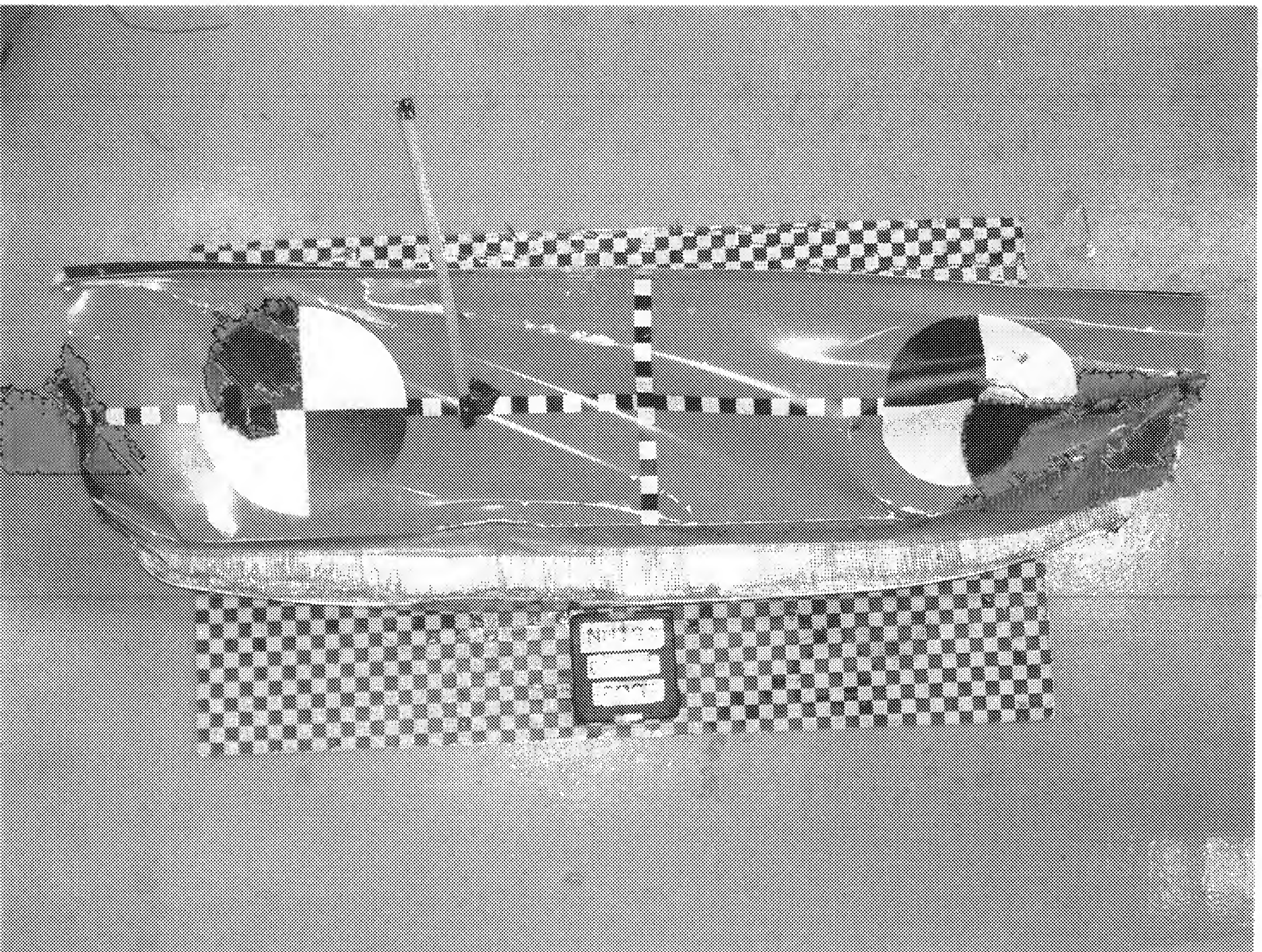


Figure A-14 Post-Test Top View of Impactor Face
A-17

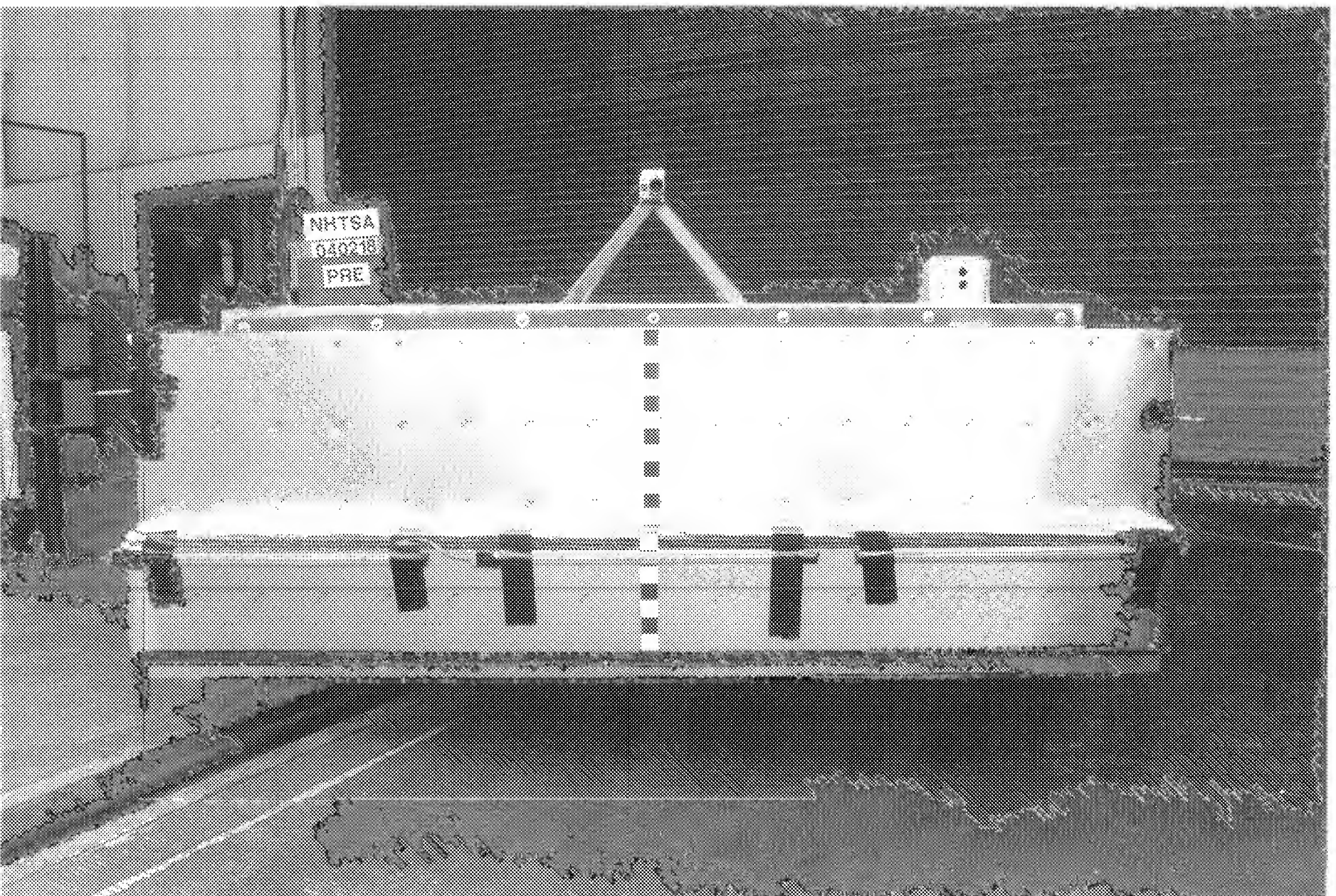


Figure A-15 Pre-Test View of MDH Showing Contact Switches in Place
A-18

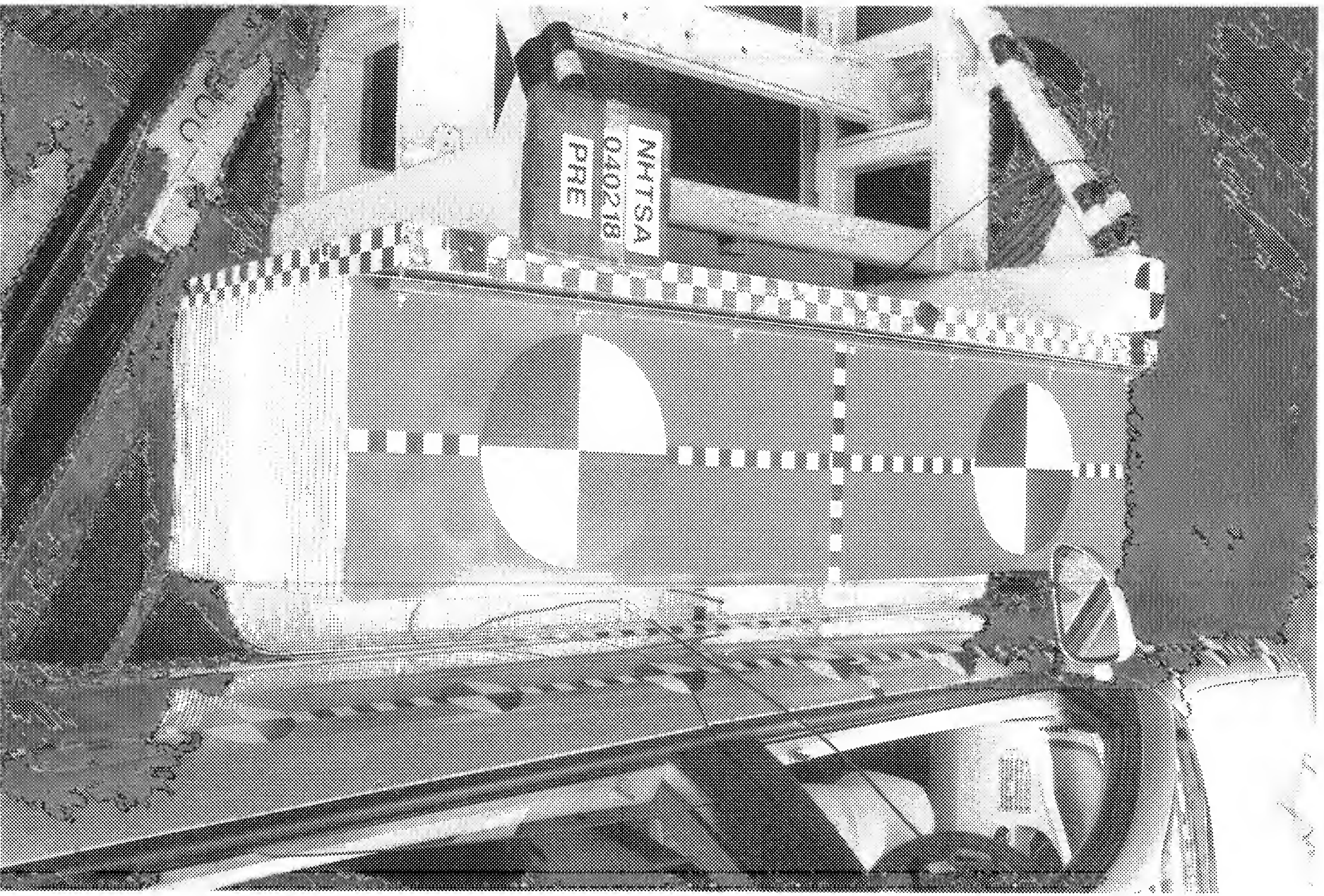


Figure A-16 Pre-Test Overhead View of MDB Aligned with Vehicle

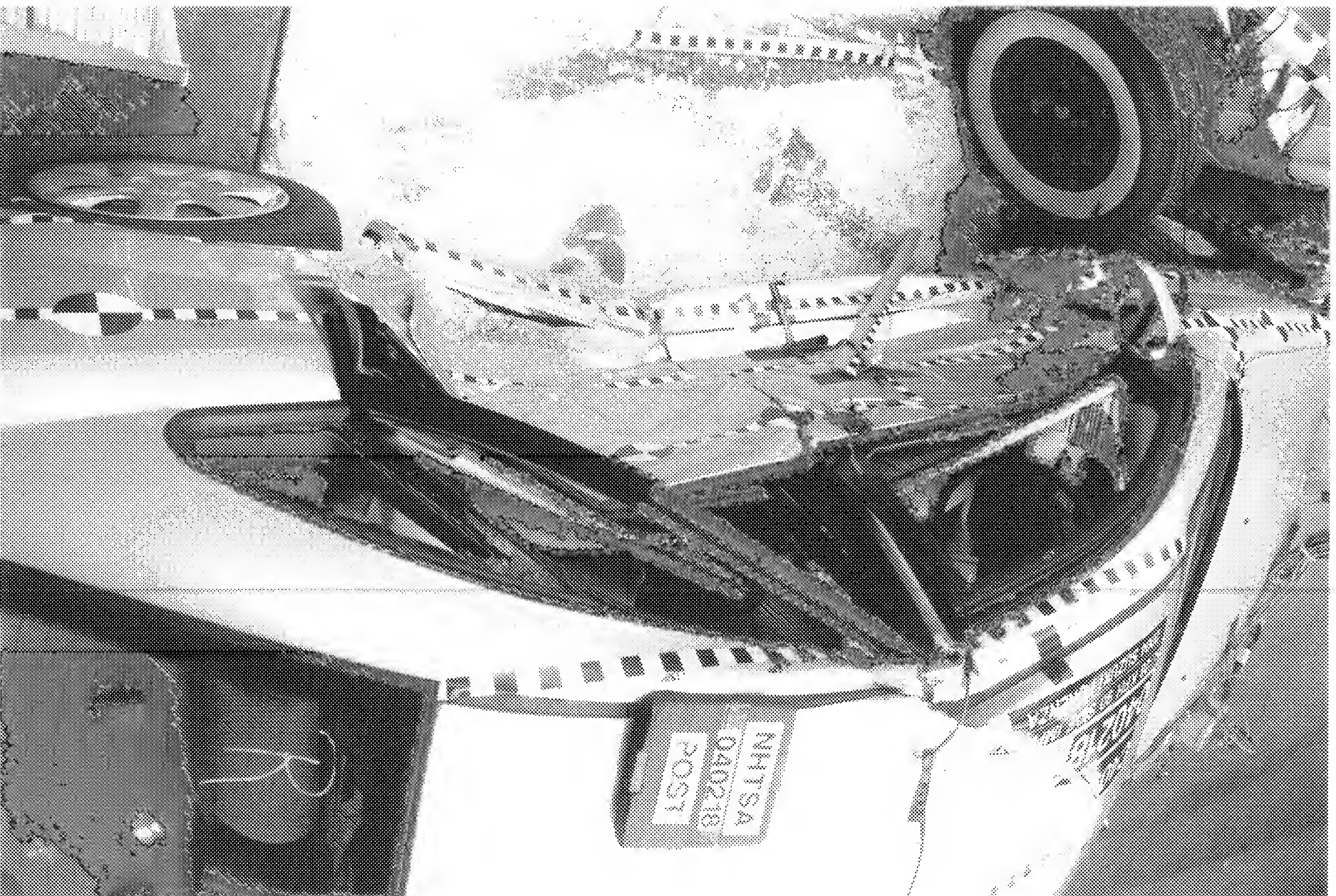


Figure A-17 Post-Test Overhead View of Vehicle

A-20

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Figure A-18 Pre-Test Right Occupant Compartment View of From SID IIII
A.21

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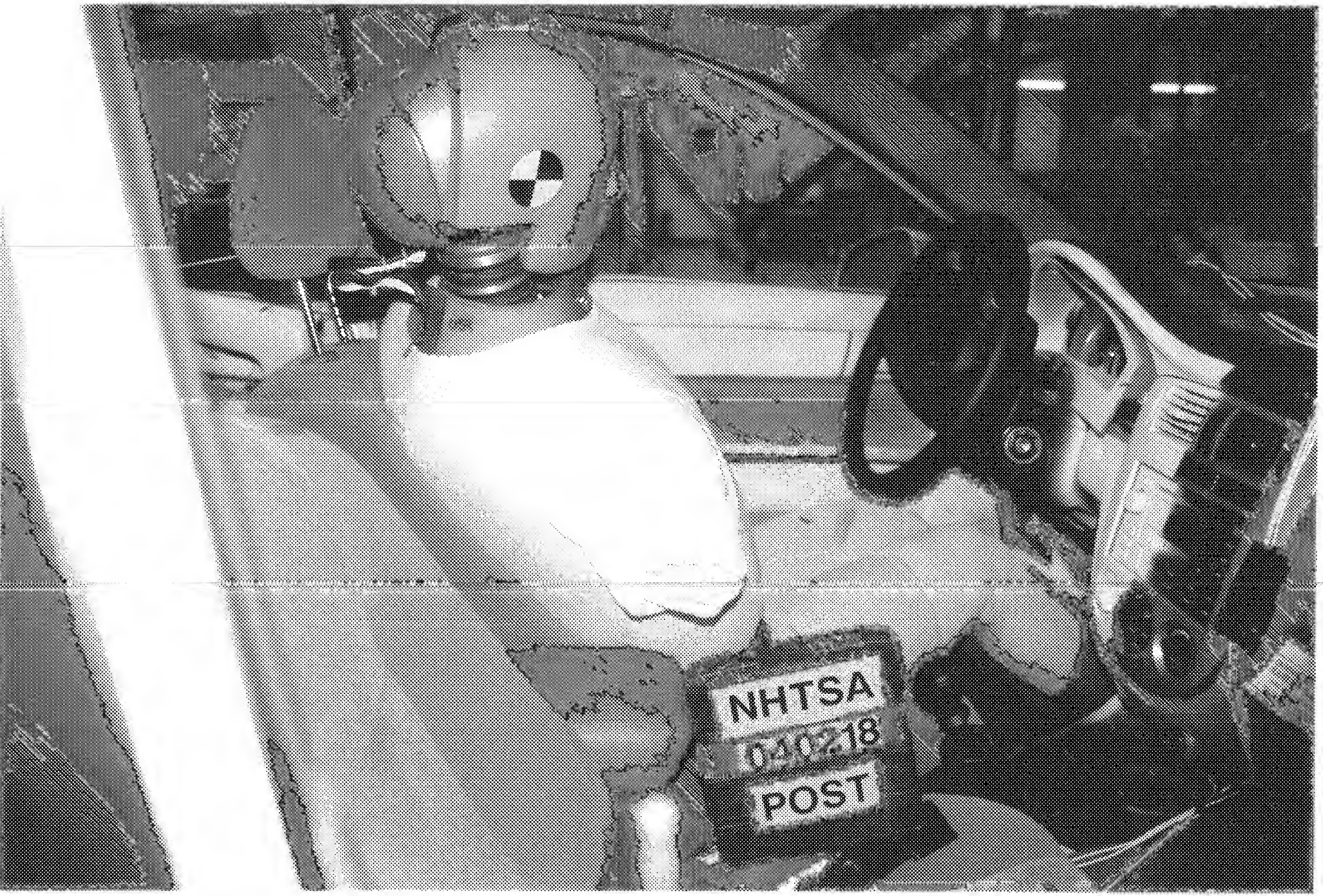


Figure A-19 Post-Test Right Occupant Compartment View of From SID IIII

A-22

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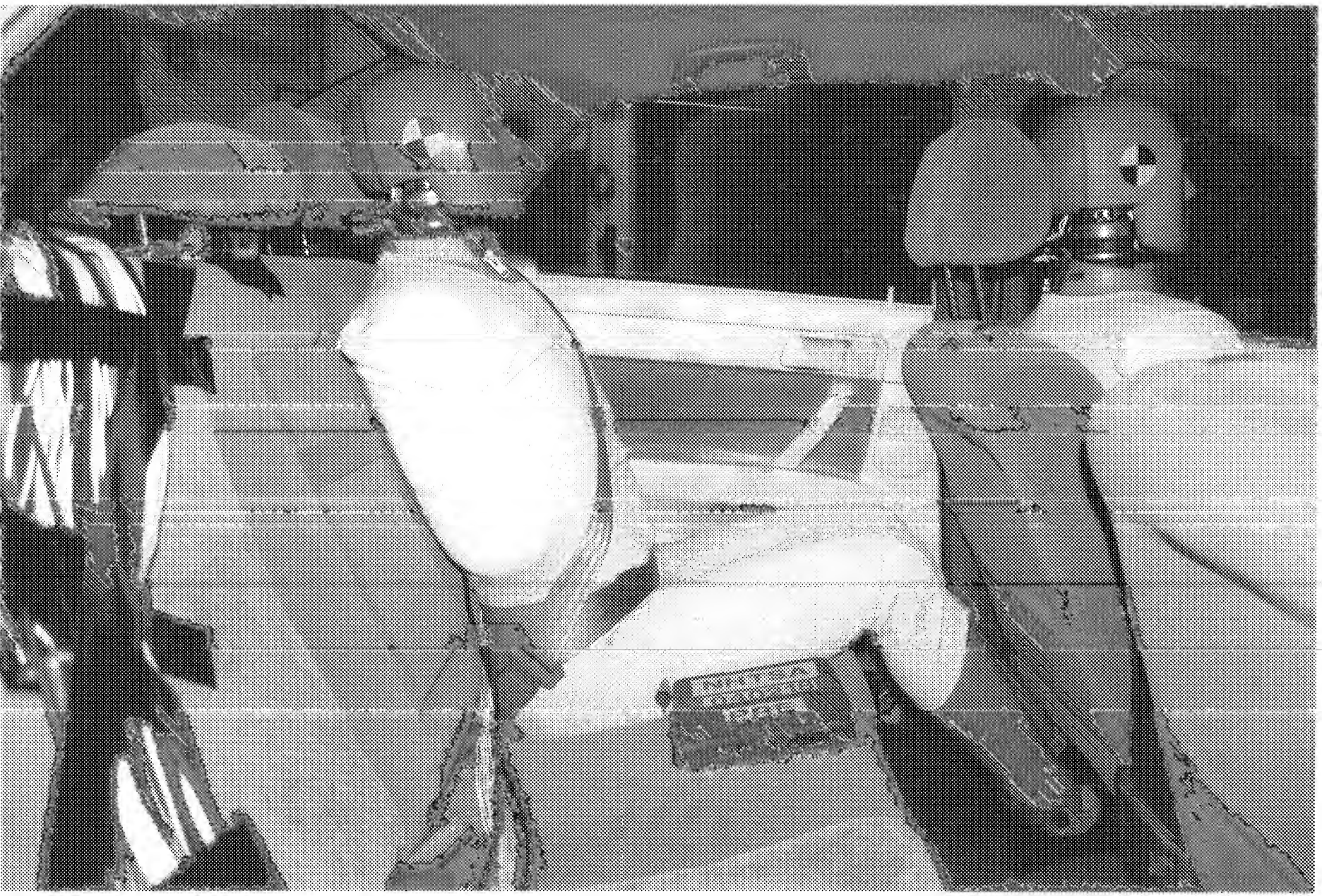


Figure A-20 Pre-Test Right Occupant Compartment View of Rear SID III
A-23

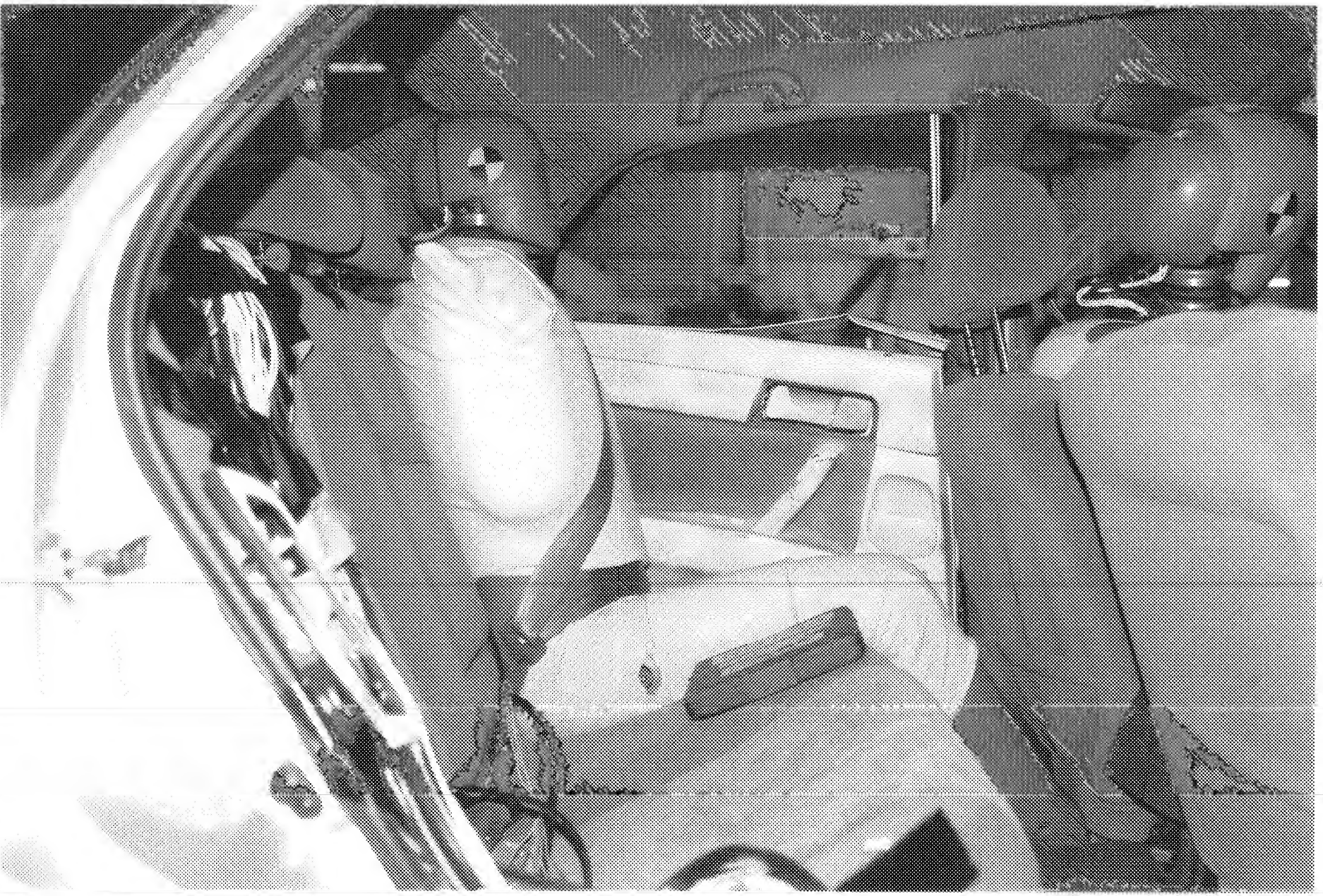


Figure A-21 Post-Test Right Occupant Compartment View of Rear SIB IIII
A-24

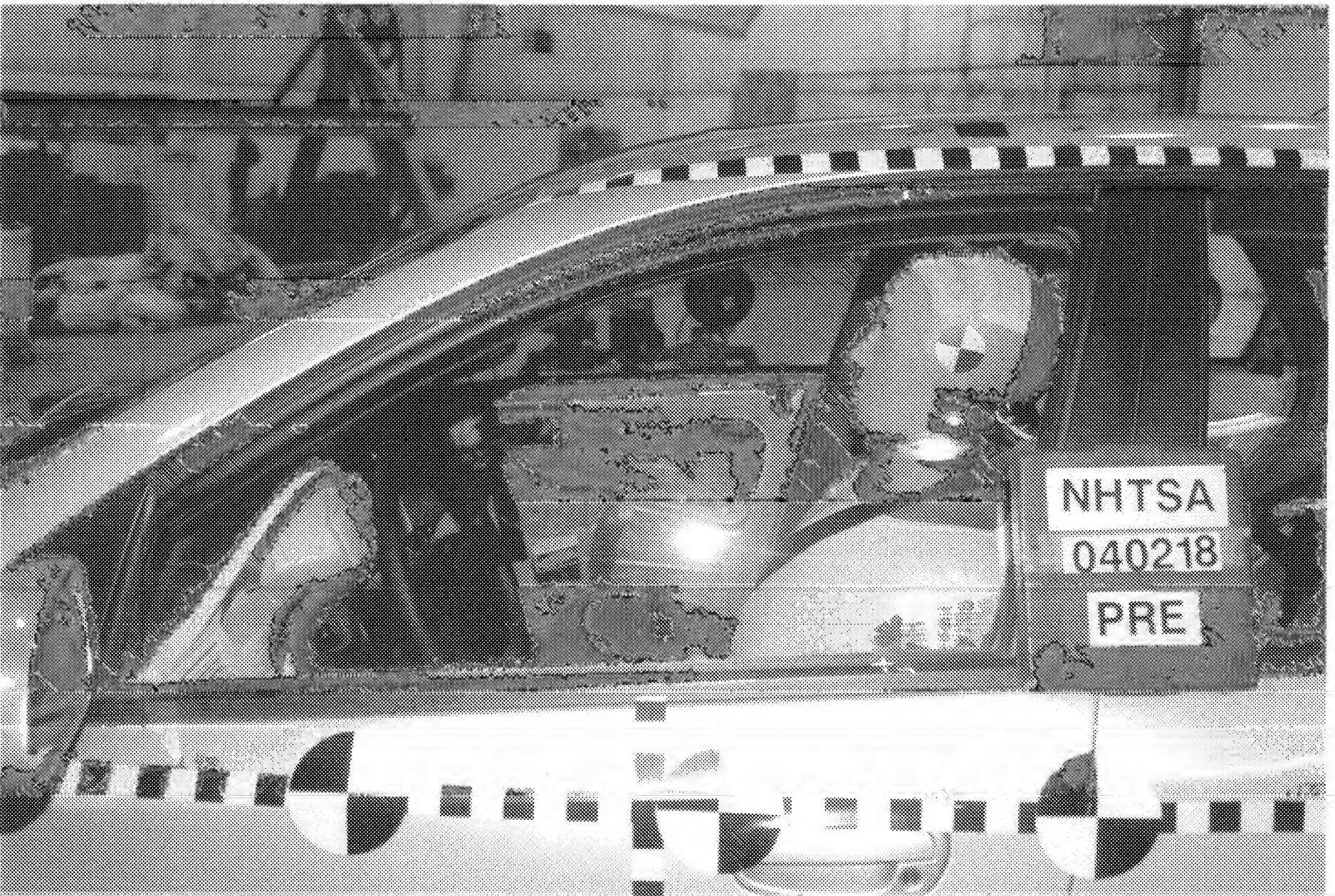


Figure A-22 Pre-Test Left View of From SID Hill



Figure A-23 Post-Test Left View of Front SID Hill
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Figure A-24 Pre-Test Left View of From SID Hill and Belt Position



Figure A-25 Pre-Test View of From SPD III and Door Clearance
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Figure A-26 Pre-Test Left View of Rear Side IIII



Figure A-27 Post-Test Left View of Rear SID HMI
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Figure A-28 Pre-Test Left View of Rear SID Hill and Belt Position



Figure A-29 Pre-Test Interior of Front Door



Figure A-30 Post-Test Interior of Front Door Showing SID III Impact Locations

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Figure A-31 Post-Test From SID Hill Contact - View 1
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Figure A-32 Post-Test From SID III Contact - View 2
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Figure A-33 Post-Test From SID Hill Contact - View 3



Figure A-34 Pre-Test Interior of Rear Panel
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Figure A-35 Post-Test Interior of Rear Panel Showing SID HII Impact Locations

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Figure A-36 Post-Test Rear SID Hull Contact - View 1

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Figure A-37 Post-Test Rear SID III Contact - View 2
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Figure A-38 Post-Test Rear SID III Contact - View 3
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Figure A-39 Pre-Test Primary Impact Point View

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Figure A-40 Post-Test Primary Impact Point View
A.43

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Figure A-41 Pre-Test Right Side View of MDV With Impactor Face in Position

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Figure A-42 Pre-Test Secondary Impact Point View
A-45

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Figure A-43 Post-Test Secondary Impact Point View

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MFG BY GM DAEWOO AUTO & TECHNOLOGY COMPANY

REPUBLIC OF KOREA

DATE

GVWR

GAWR FRT

GAWR RR

9/03

3682LB

1918LB

1764LB

THIS VEHICLE CONFORMS TO ALL APPLICABLE
U.S. MOTOR VEHICLE SAFETY, BUMPER,
AND CONVENTION STANDARDS IN EFFECT
DATE OF MANUFACTURE SHOWN ABOVE

4K928166

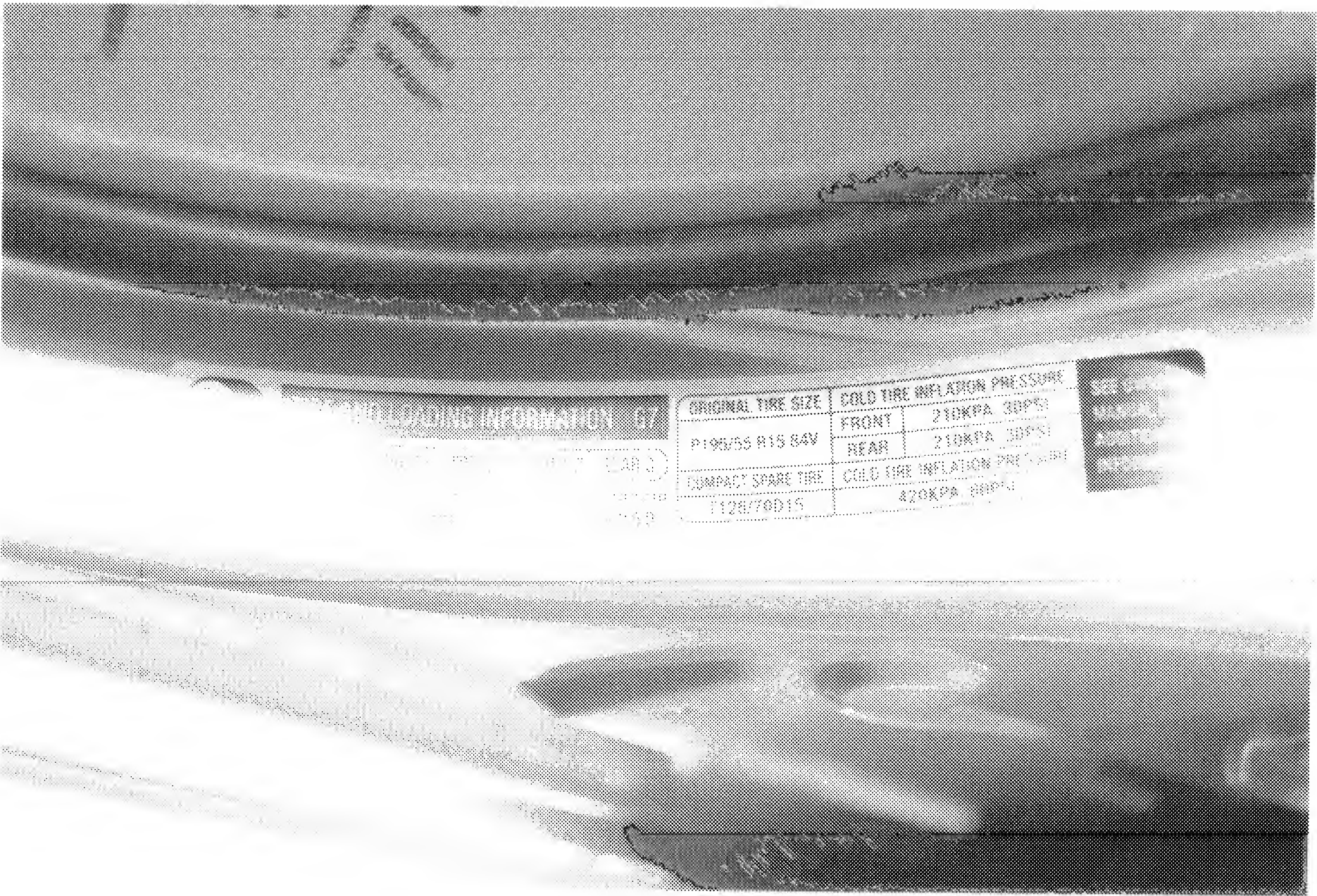
PASS. CAR

P.N.96 404 578

Figure A-44 Vehicle Certification Label View

A-47

040218



WEIGHT AND LOADING INFORMATION 67

WEIGHT AND LOADING INFORMATION 67
WEIGHT AND LOADING INFORMATION 67
WEIGHT AND LOADING INFORMATION 67

ORIGINAL TIRE SIZE	COLD TIRE INFLATION PRESSURE	
	FRONT	REAR
P195/55 R15 84V	210KPA 30PSI	210KPA 30PSI
COMPACT SPARE TIRE	COLD TIRE INFLATION PRESSURE	
	420KPA 60PSI	
T125/70D15		

SEE OWNER'S MANUAL FOR
TIRE INFORMATION

Figure A-45 Vehicle Recommended Tire Pressure Label View
A-48



Figure A-46 Impact Event
A-49



Figure A-47 Pre-Test Fuel Cap
A-50

040218

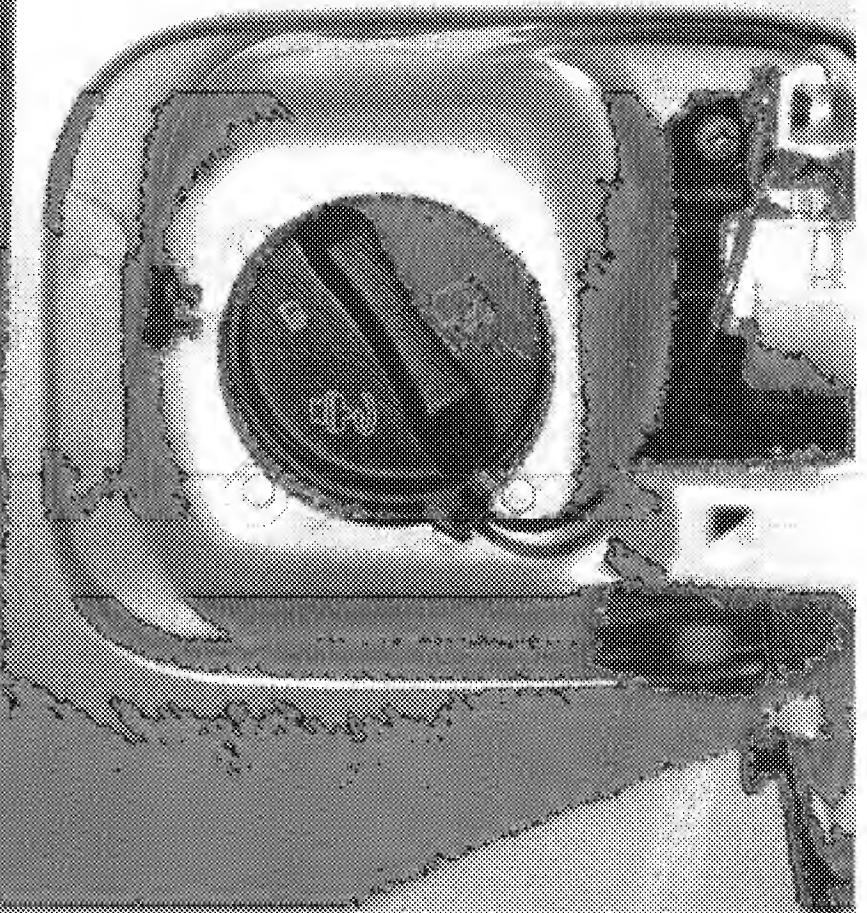


Figure A-48 Post-Test Fuel Cap
A-51

Appendix B

Data Plots

Table of Data Plots

Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - Filter Class 1000

Integration Data - Filter Class 180

Force Data - Filter Class 1000

Moment Data - Filter Class 600

Contact Data - Filter Class 1000

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
1	Driver Head X-Axis Acceleration	B-11
2	Driver Head X-Axis Velocity	B-12
3	Driver Head Y-Axis Acceleration	B-13
4	Driver Head Y-Axis Velocity	B-14
5	Driver Head Z-Axis Acceleration	B-15
6	Driver Head Z-Axis Velocity	B-16
7	Driver Head Resultant Acceleration	B-17
8	Driver Neck X-Axis Shear Force	B-18
9	Driver Neck Y-Axis Shear Force	B-19
10	Driver Neck Z-Axis Axial Force	B-20
11	Driver Neck Moment about X Axis	B-21
12	Driver Neck Moment about Y Axis	B-22
13	Driver Neck Moment about Z Axis	B-23
14	Driver Neck Occipital Condyle Moment about X Axis	B-24
15	Driver Upper Rib Y-Axis Acceleration	B-25
16	Driver Upper Rib Y-Axis Velocity	B-26
17	Driver Lower Rib Y-Axis Acceleration	B-27
18	Driver Lower Rib Y-Axis Velocity	B-28
19	Driver Lower Spine Y-Axis Acceleration	B-29
20	Driver Lower Spine Y-Axis Velocity	B-30
21	Driver Pelvis Y-Axis Acceleration	B-31
22	Driver Pelvis Y-Axis Velocity	B-32
23	Driver Shoulder Contact Switch	B-33
24	Driver Pelvis Contact Switch	B-34

Table of Data Plots (Continued)

Driver and Passenger Dummy Instrumentation Plots (Continued)

Acceleration Data - Filter Class 1000

Integration Data - Filter Class 180

Force Data - Filter Class 1000

Moment Data - Filter Class 600

Contact Data - Filter Class 1000

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
25	Left Rear Passenger Head X-Axis Acceleration	B-35
26	Left Rear Passenger Head X-Axis Velocity	B-36
27	Left Rear Passenger Head Y-Axis Acceleration	B-37
28	Left Rear Passenger Head Y-Axis Velocity	B-38
29	Left Rear Passenger Head Z-Axis Acceleration	B-39
30	Left Rear Passenger Head Z-Axis Velocity	B-40
31	Left Rear Passenger Head Resultant Acceleration	B-41
32	Left Rear Passenger Neck X-Axis Shear Force	B-42
33	Left Rear Passenger Neck Y-Axis Shear Force	B-43
34	Left Rear Passenger Neck Z-Axis Axial Force	B-44
35	Left Rear Passenger Neck Moment about X Axis	B-45
36	Left Rear Passenger Neck Moment about Y Axis	B-46
37	Left Rear Passenger Neck Moment about Z Axis	B-47
38	Left Rear Passenger Neck Occipital Condyle Moment about X Axis	B-48
39	Left Rear Passenger Upper Rib Y-Axis Acceleration	B-49
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41	Left Rear Passenger Lower Rib Y-Axis Acceleration	B-51
42	Left Rear Passenger Lower Rib Y-Axis Velocity	B-52
43	Left Rear Passenger Lower Spine Y-Axis Acceleration	B-53
44	Left Rear Passenger Lower Spine Y-Axis Velocity	B-54
45	Left Rear Passenger Pelvis Y-Axis Acceleration	B-55
46	Left Rear Passenger Pelvis Y-Axis Velocity	B-56
47	Left Rear Passenger Shoulder Contact Switch	B-57
48	Left Rear Passenger Pelvis Contact Switch	B-58

Table of Data Plots (Continued)

Driver and Passenger Dummy Redundant Instrumentation Plots

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
49	Driver Head X-Axis Redundant Acceleration	B-60
50	Driver Head X-Axis Redundant Velocity	B-61
51	Driver Head Y-Axis Redundant Acceleration	B-62
52	Driver Head Y-Axis Redundant Velocity	B-63
53	Driver Head Z-Axis Redundant Acceleration	B-64
54	Driver Head Z-Axis Redundant Velocity	B-65
55	Driver Head Resultant Redundant Acceleration	B-66
56	Driver Upper Rib Y-Axis Redundant Acceleration	B-67
57	Driver Upper Rib Y-Axis Redundant Velocity	B-68
58	Driver Lower Rib Y-Axis Redundant Acceleration	B-69
59	Driver Lower Rib Y-Axis Redundant Velocity	B-70
60	Driver Lower Spine Y-Axis Redundant Acceleration	B-71
61	Driver Lower Spine Y-Axis Redundant Velocity	B-72
62	Driver Pelvis Y-Axis Redundant Acceleration	B-73
63	Driver Pelvis Y-Axis Redundant Velocity	B-74
64	Left Rear Passenger Head X-Axis Redundant Acceleration	B-75
65	Left Rear Passenger Head X-Axis Redundant Velocity	B-76
66	Left Rear Passenger Head Y-Axis Redundant Acceleration	B-77
67	Left Rear Passenger Head Y-Axis Redundant Velocity	B-78
68	Left Rear Passenger Head Z-Axis Redundant Acceleration	B-79
69	Left Rear Passenger Head Z-Axis Redundant Velocity	B-80
70	Left Rear Passenger Head Resultant Redundant Acceleration	B-81
71	Left Rear Passenger Upper Rib Y-Axis Redundant Acceleration	B-82
72	Left Rear Passenger Upper Rib Y-Axis Redundant Velocity	B-83

Table of Data Plots (Continued)

Driver and Passenger Dummy Redundant Instrumentation Plots (Continued)

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
73	Left Rear Passenger Lower Rib Y-Axis Redundant Acceleration	B-84
74	Left Rear Passenger Lower Rib Y-Axis Redundant Velocity	B-85
75	Left Rear Passenger Lower Spine Y-Axis Redundant Acceleration	B-86
76	Left Rear Passenger Lower Spine Y-Axis Redundant Velocity	B-87
77	Left Rear Passenger Pelvis Y-Axis Redundant Acceleration	B-88
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Table of Data Plots (Continued)
Test Vehicle Instrumentation Plots
Acceleration Data - Filter Class 60
Integration Data - Filter Class 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
79	Right Side Sill at Front Seat X-Axis Acceleration	B-91
80	Right Side Sill at Front Seat X-Axis Velocity	B-92
81	Right Side Sill at Front Seat Y-Axis Acceleration	B-93
82	Right Side Sill at Front Seat Y-Axis Velocity	B-94
83	Right Side Sill at Front Seat Z-Axis Acceleration	B-95
84	Right Side Sill at Front Seat Z-Axis Velocity	B-96
85	Right Side Sill at Front Seat Resultant Acceleration	B-97
86	Right Side Sill at Rear Seat X-Axis Acceleration	B-98
87	Right Side Sill at Rear Seat X-Axis Velocity	B-99
88	Right Side Sill at Rear Seat Y-Axis Acceleration	B-100
89	Right Side Sill at Rear Seat Y-Axis Velocity	B-101
90	Right Side Sill at Rear Seat Z-Axis Acceleration	B-102
91	Right Side Sill at Rear Seat Z-Axis Velocity	B-103
92	Right Side Sill at Rear Seat Resultant Acceleration	B-104
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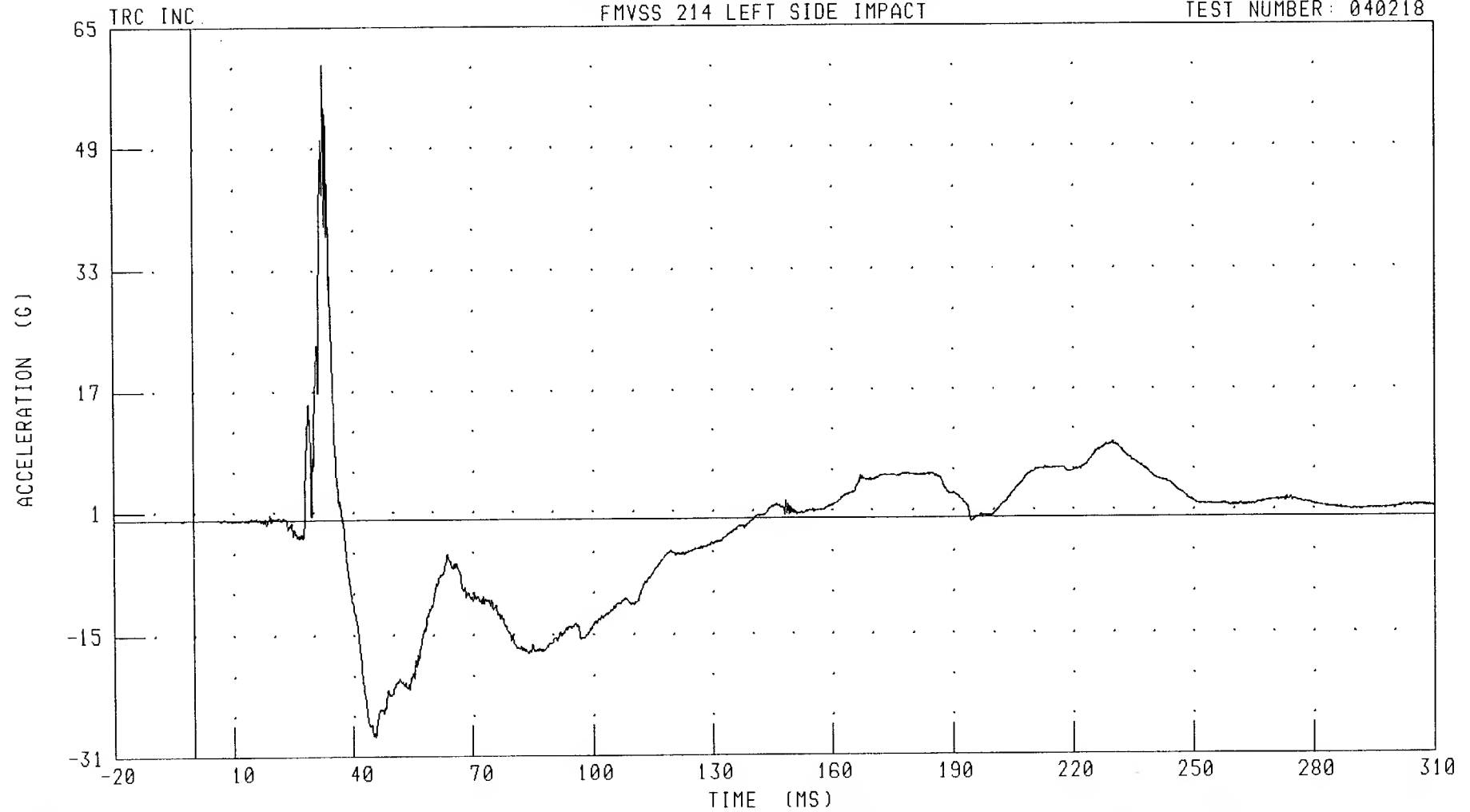
Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXC1 FILTER: CH. CLASS 1000

PEAK DATA: 59.97 G @ 32.80 MS; -28.45 G @ 45.52 MS

B-11

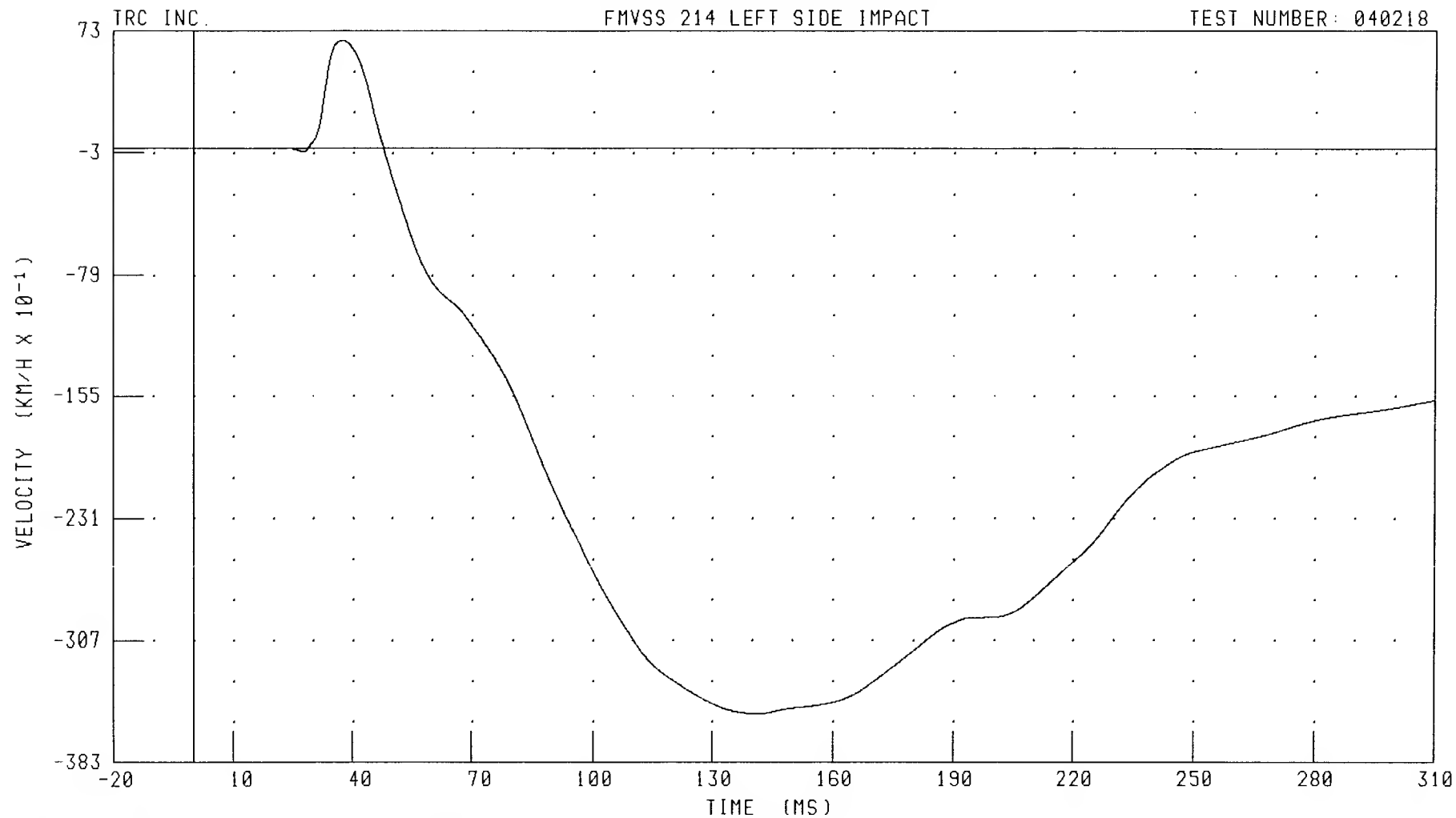
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXV1 FILTER: CH. CLASS 100

PEAK DATA: 6.68 KM/H @ 37.36 MS; -35.29 KM/H @ 140.40 MS

B-12

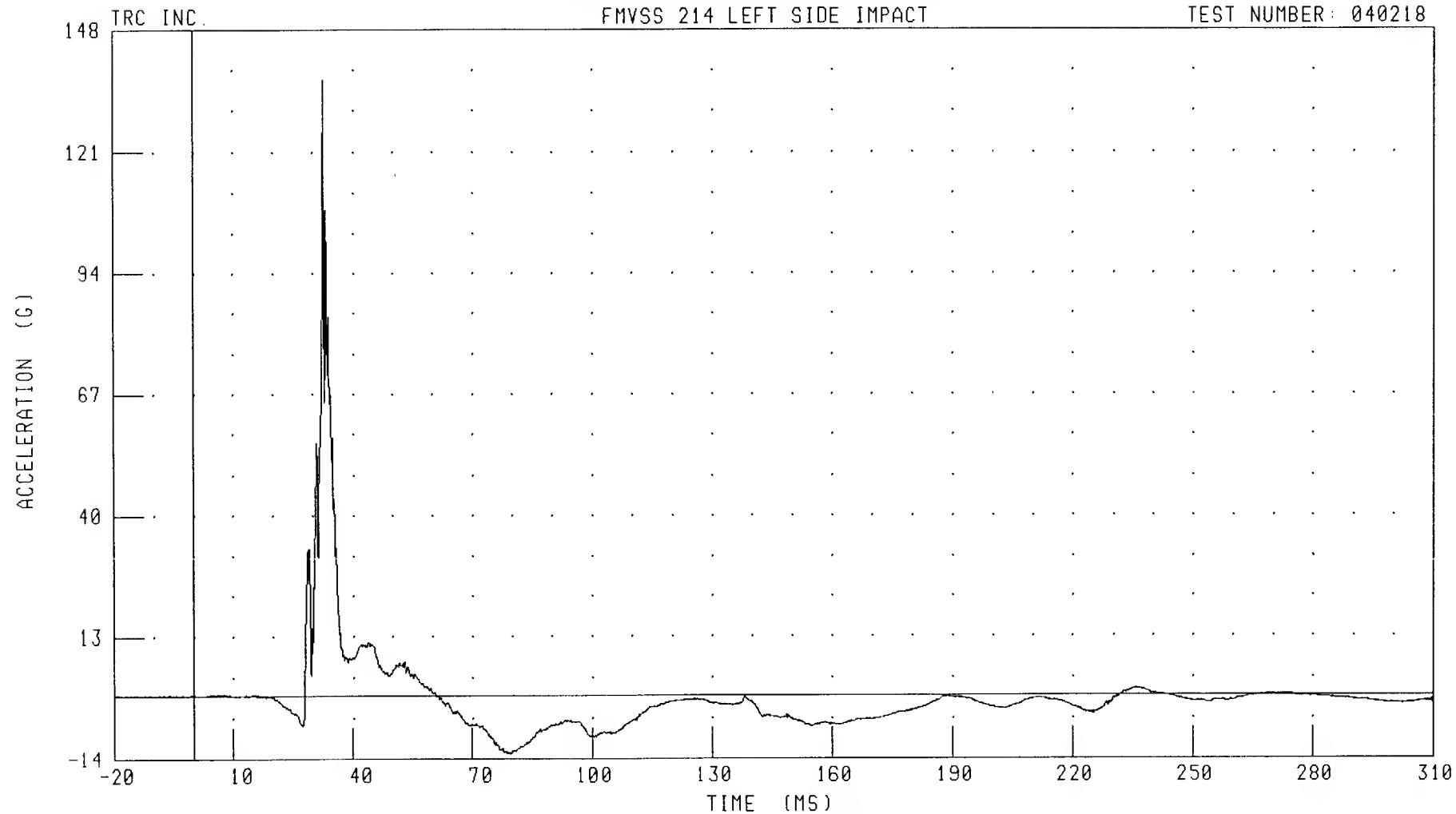
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYG1 FILTER: CH. CLASS 1000

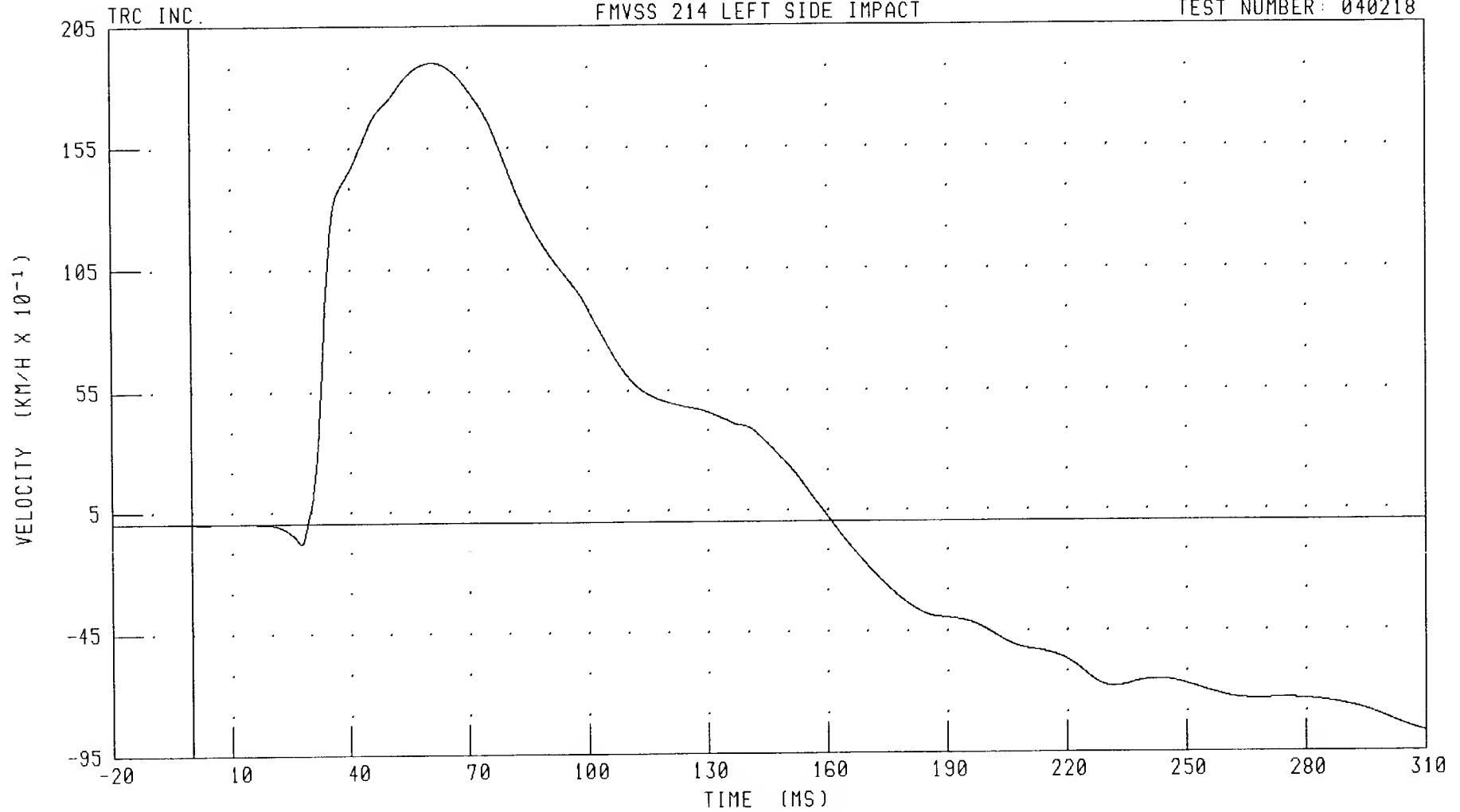
PEAK DATA: 136.92 G @ 32.72 MS; -12.96 G @ 79.76 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYV1

FILTER: CH. CLASS 180

PEAK DATA: 19.02 KM/H @ 61.04 MS; -8.70 KM/H @ 310.00 MS

B-14

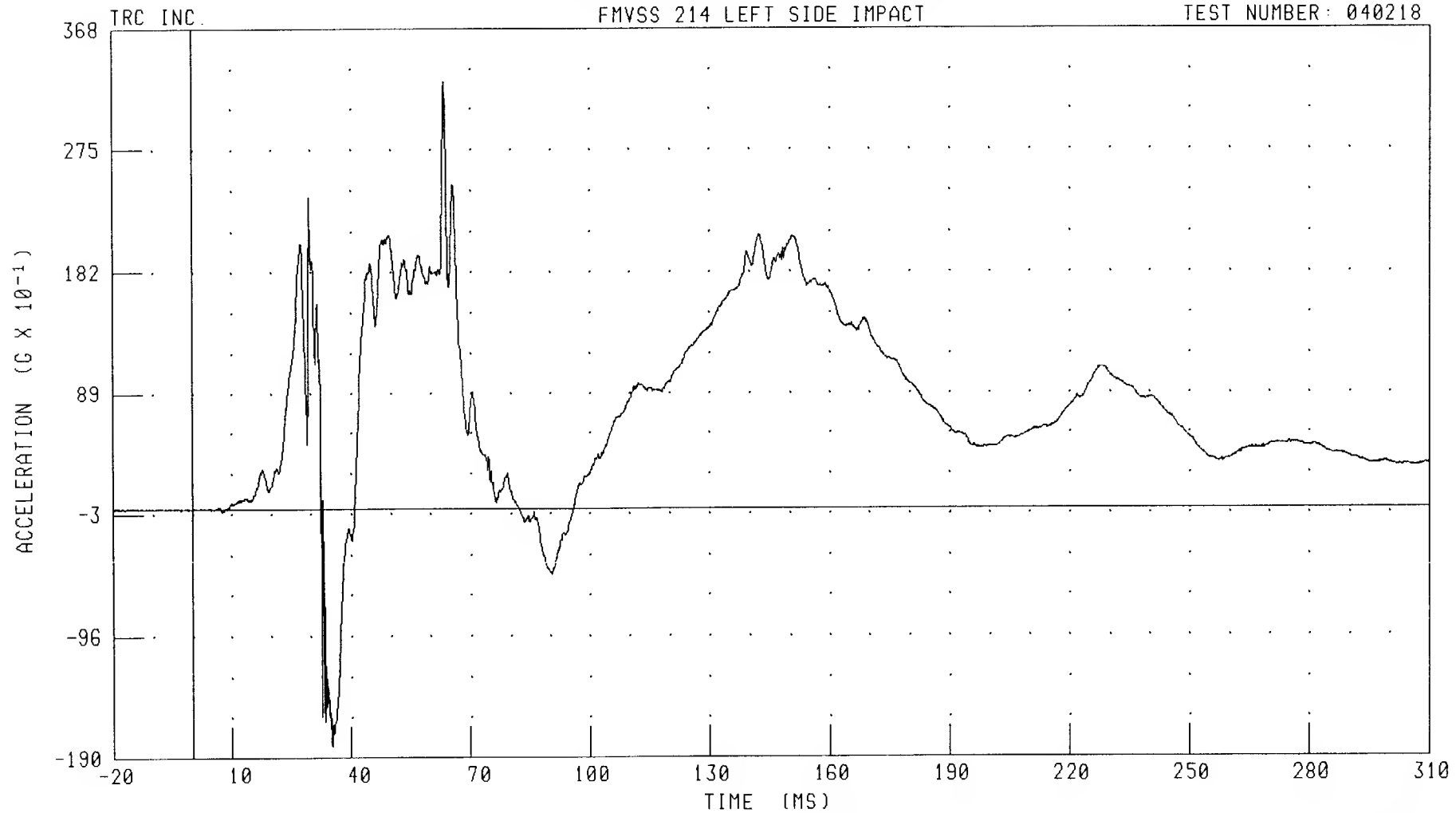
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZG1 FILTER: CH CLASS 1000

PEAK DATA: 32.69 G @ 63.44 MS; -18.11 G @ 35.28 MS

B-15

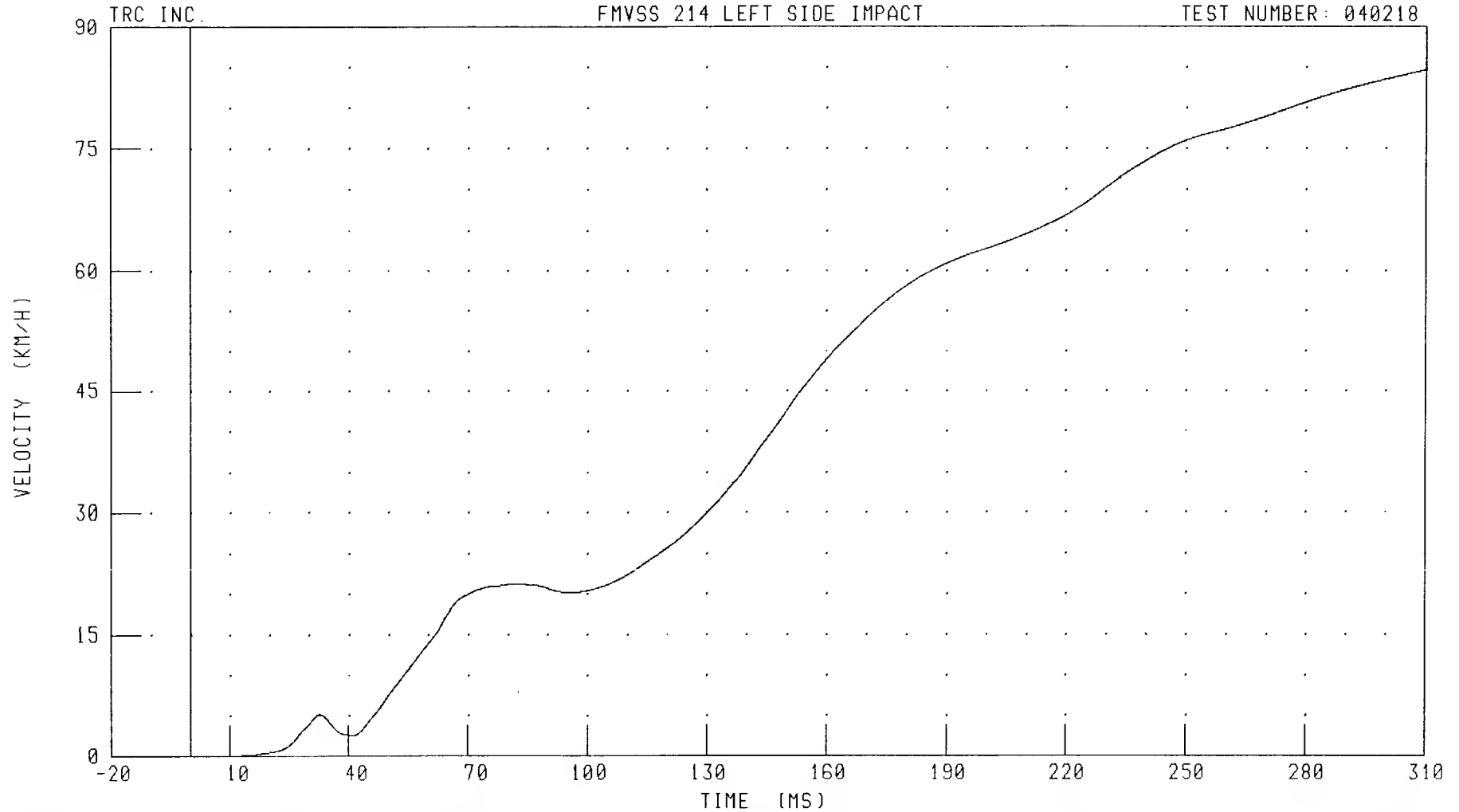
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZV1 FILTER: CH CLASS 180

PEAK DATA: 84.70 KM/H @ 310.00 MS; -0.01 KM/H @ 8.88 MS

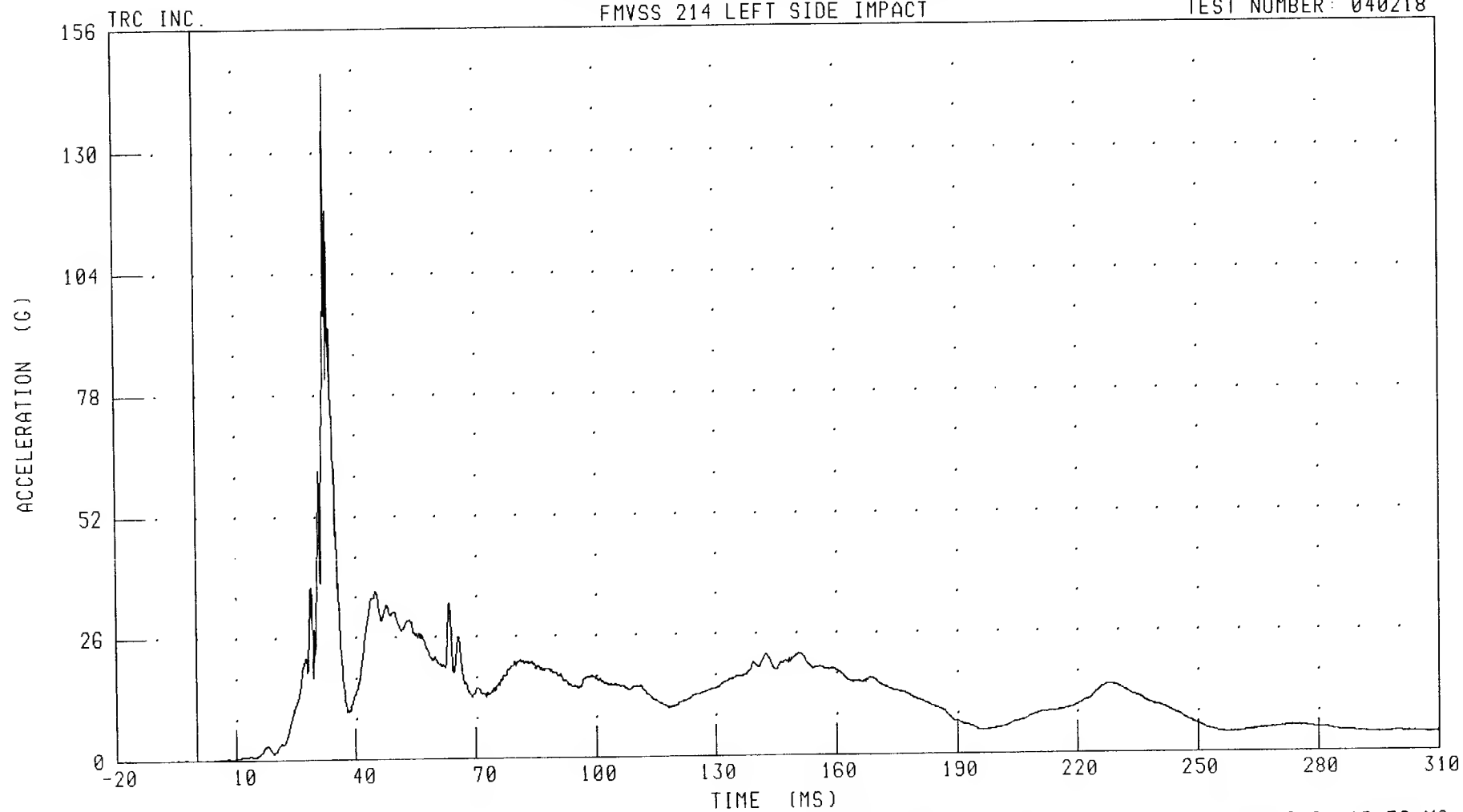
B-16

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDRG1 FILTER: CH CLASS 1000

B-17

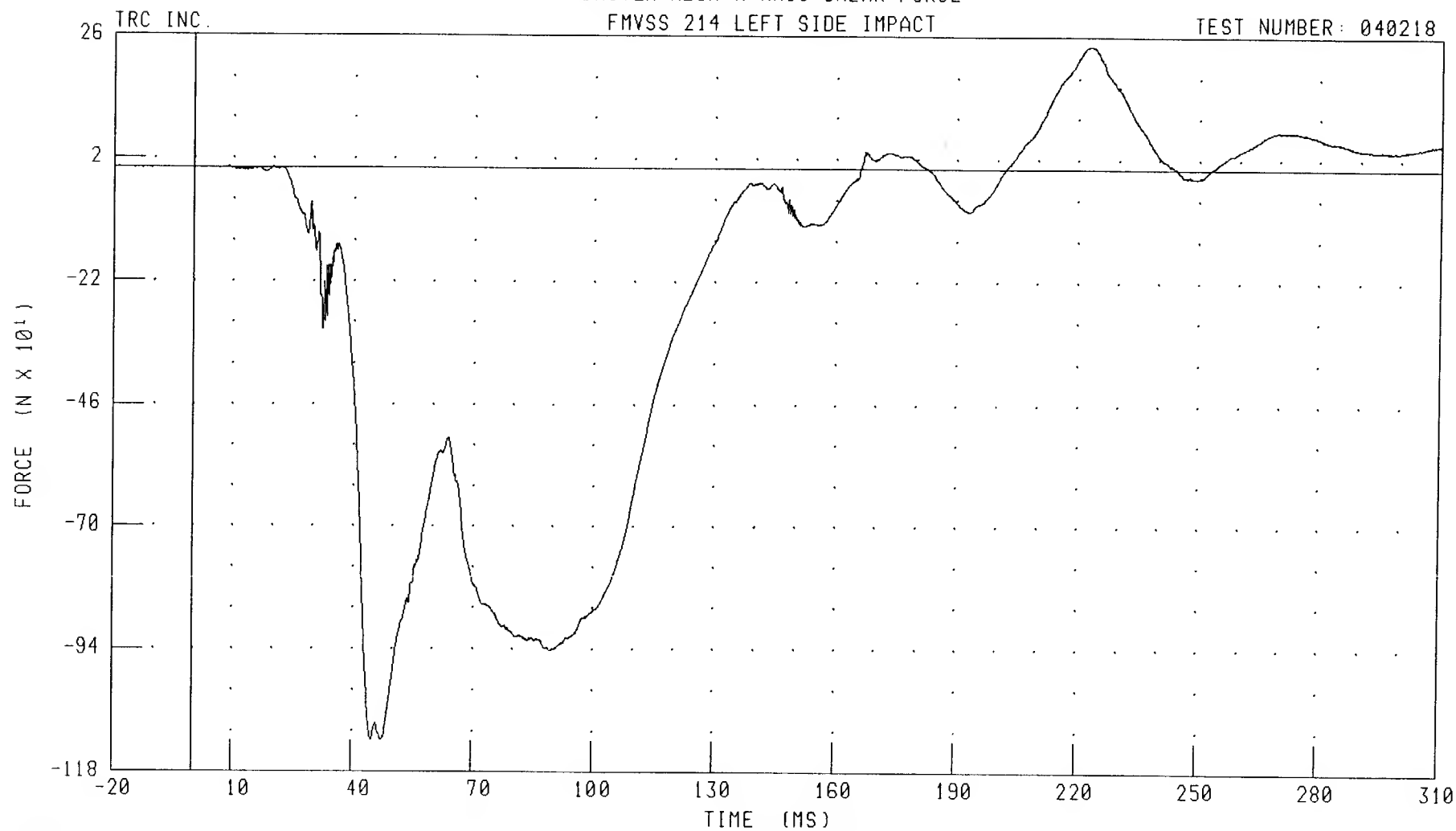
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK X-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKXF1 FILTER: CH. CLASS 1000

PEAK DATA: 242.03 N @ 222.80 MS; -1117.88 N @ 44.80 MS

B-18

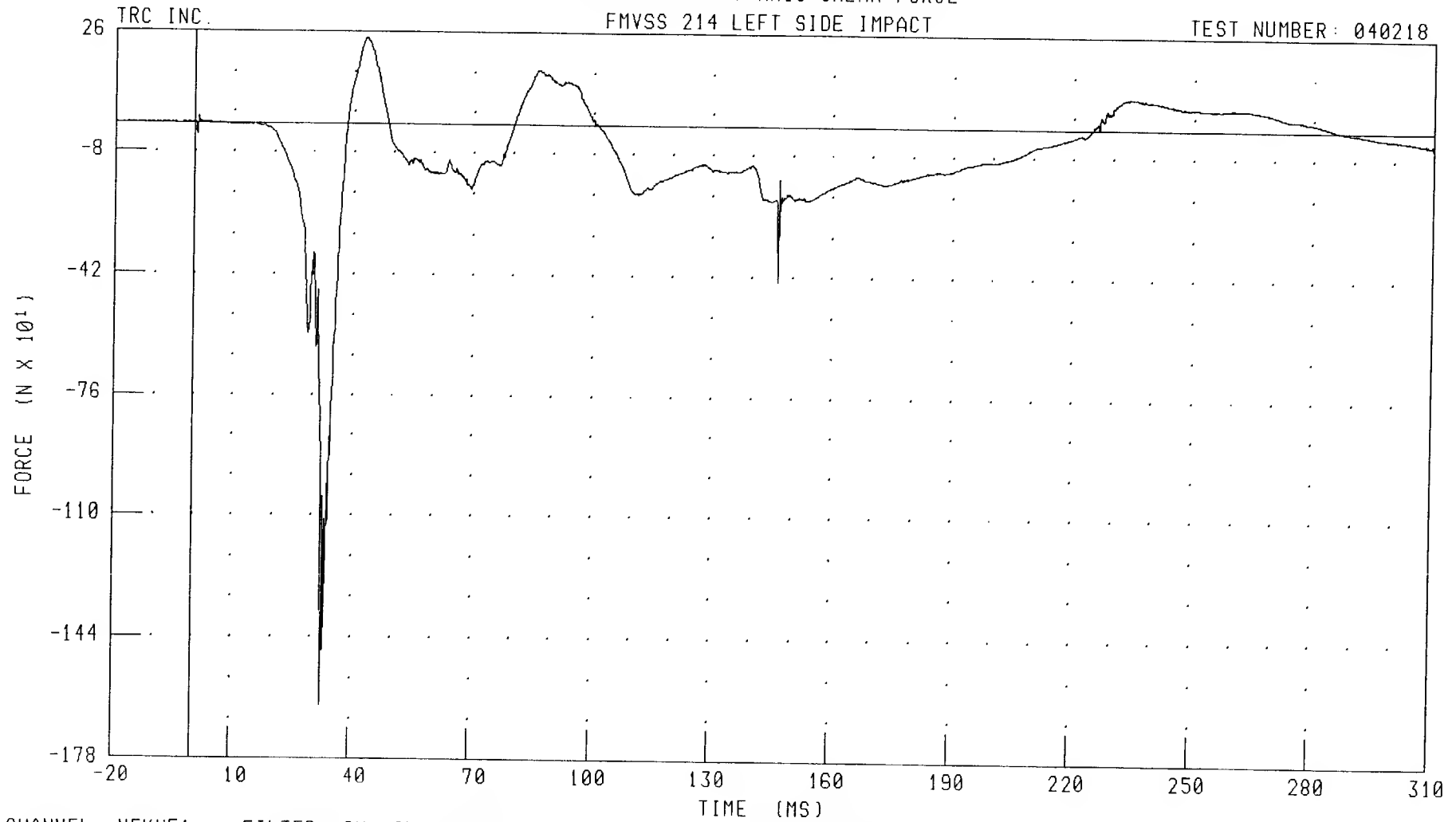
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK Y-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKYF1

FILTER: CH. CLASS 1000

PEAK DATA: 242.72 N @ 43.04 MS; -1631.02 N @ 32.80 MS

B-19

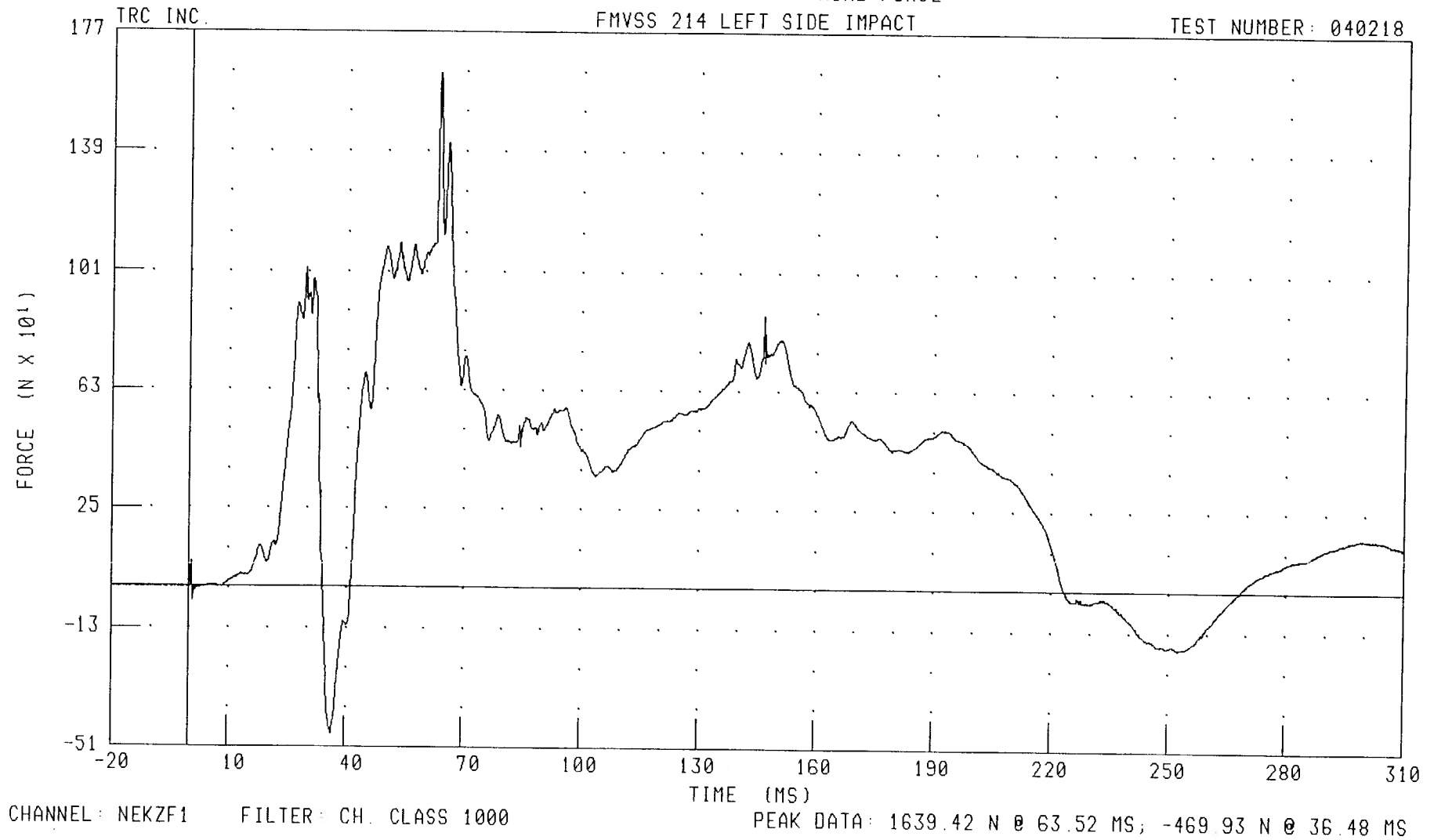
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK Z-AXIS AXIAL FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



B-20

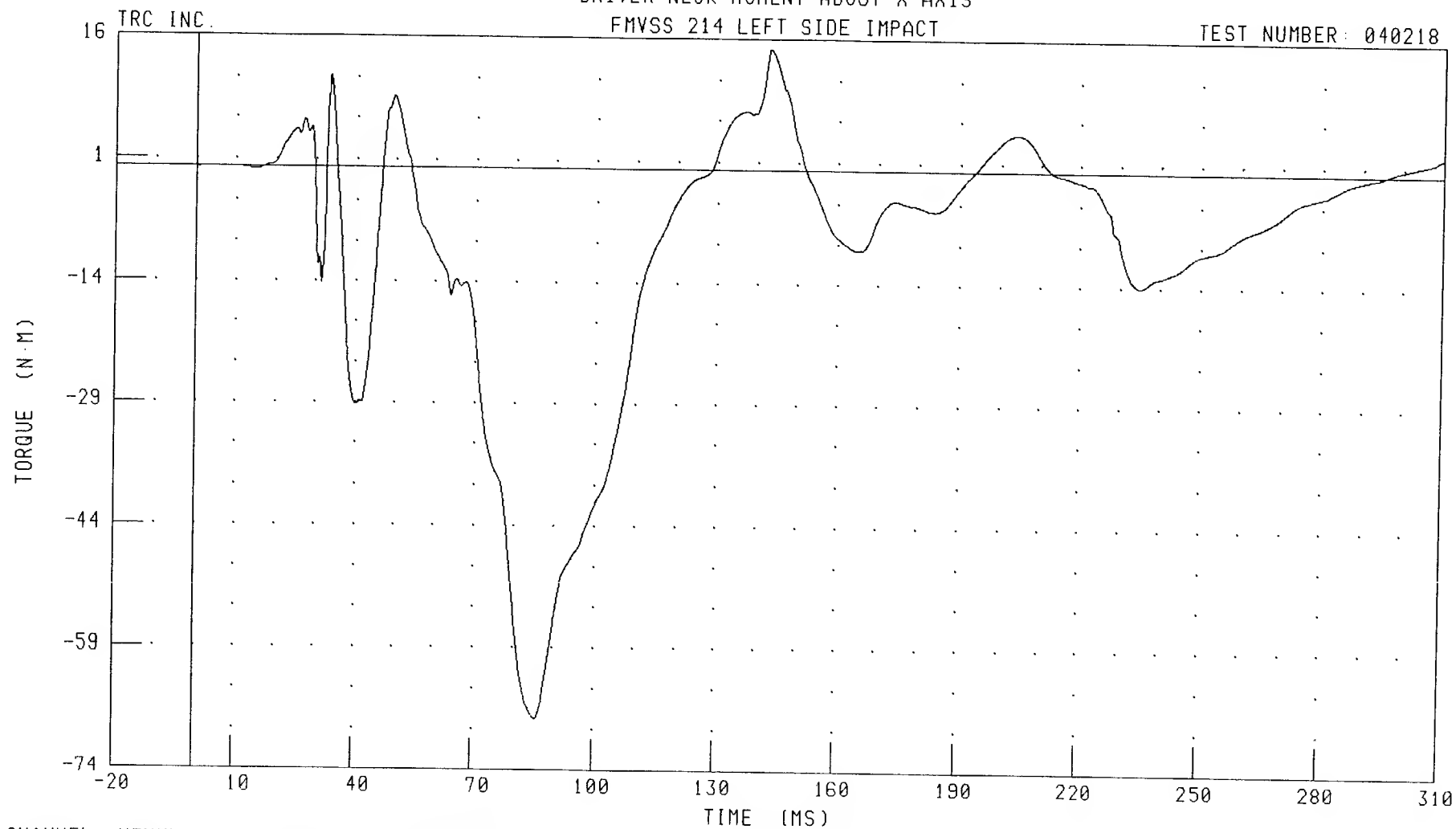
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKXM1

FILTER: CH. CLASS 600

PEAK DATA: 14.77 N·m @ 142.80 MS; -67.73 N·m @ 86.00 MS

B-21

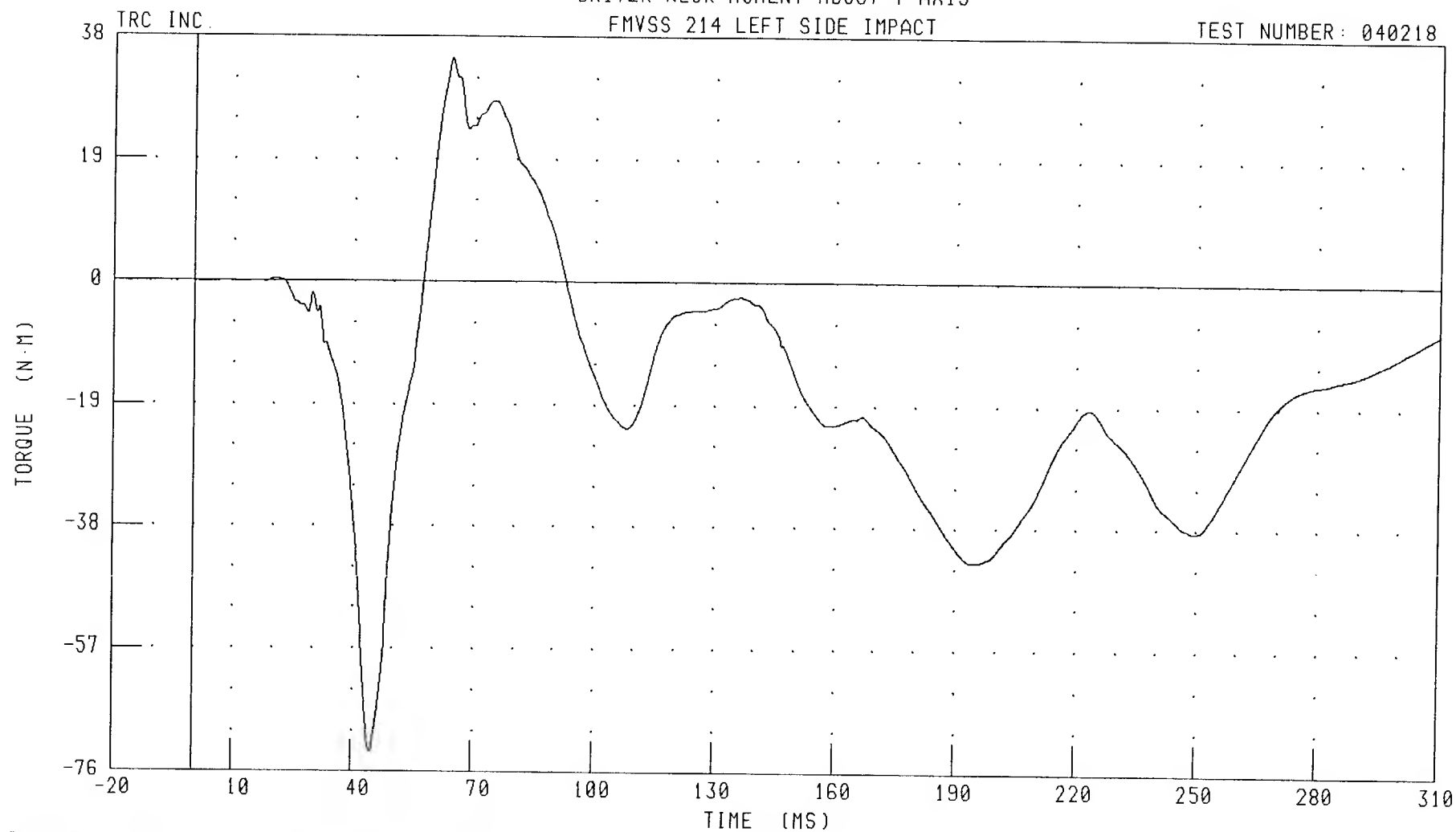
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK MOMENT ABOUT Y AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKYM1 FILTER: CH. CLASS 600

B-22

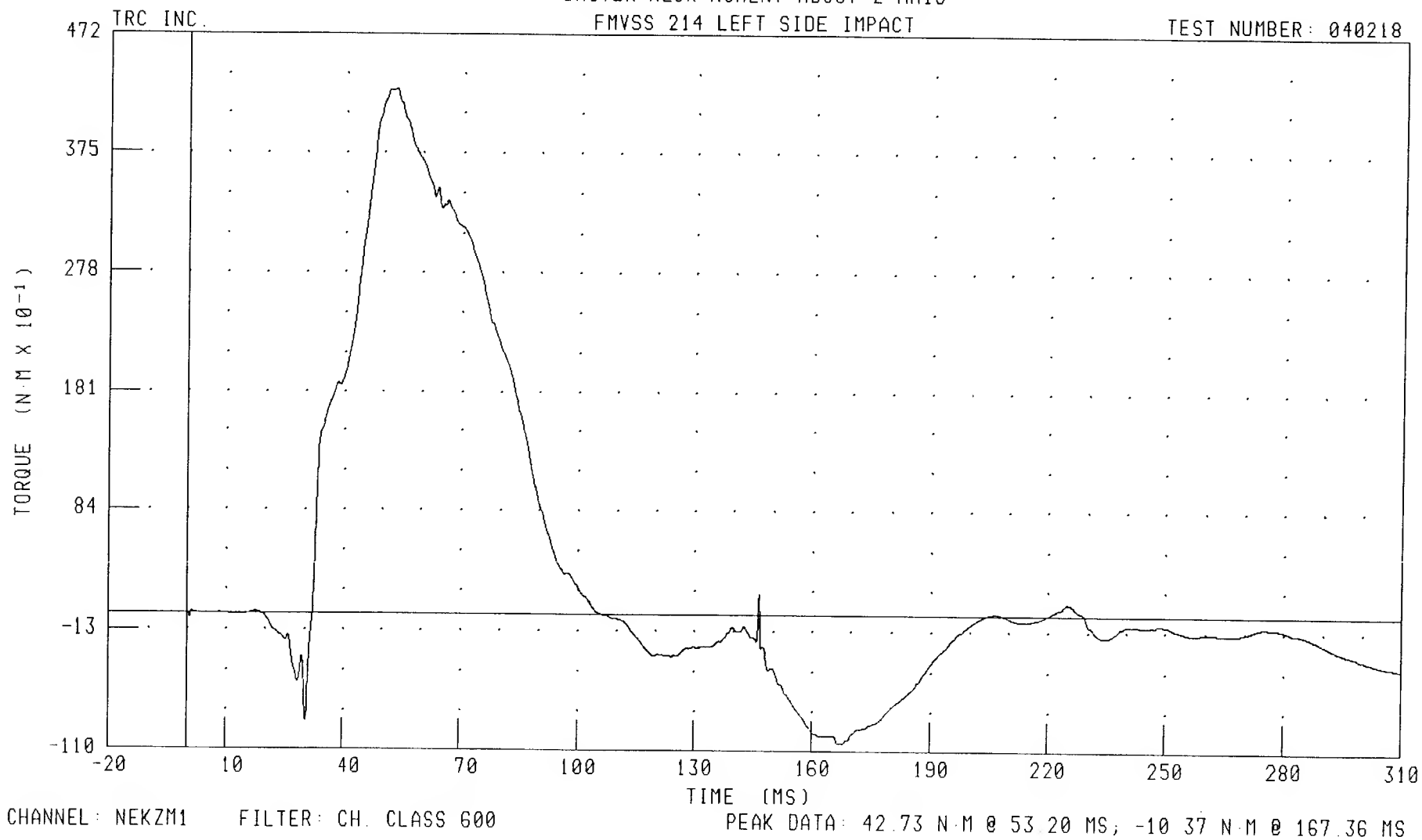
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER NECK MOMENT ABOUT Z AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



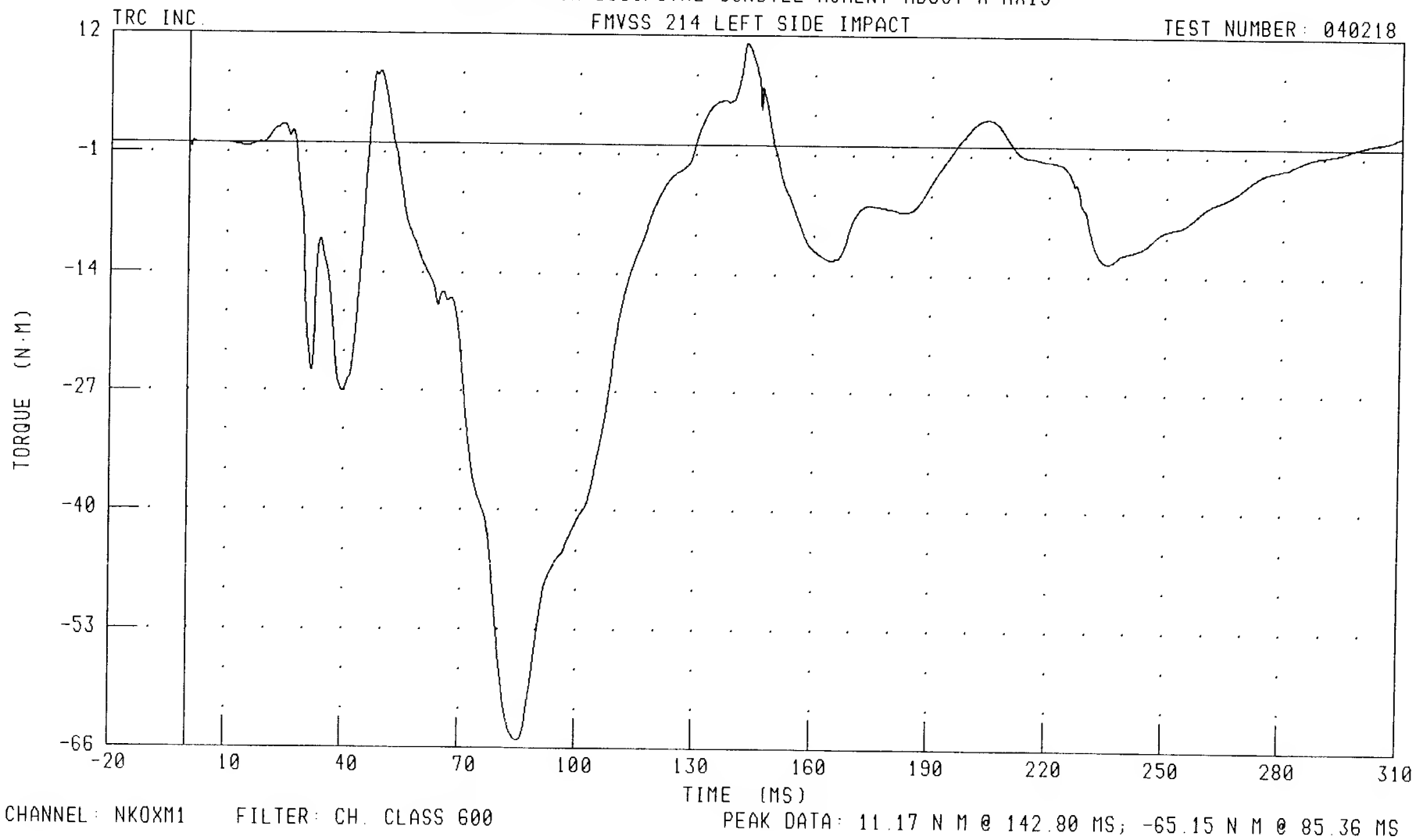
B-23

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



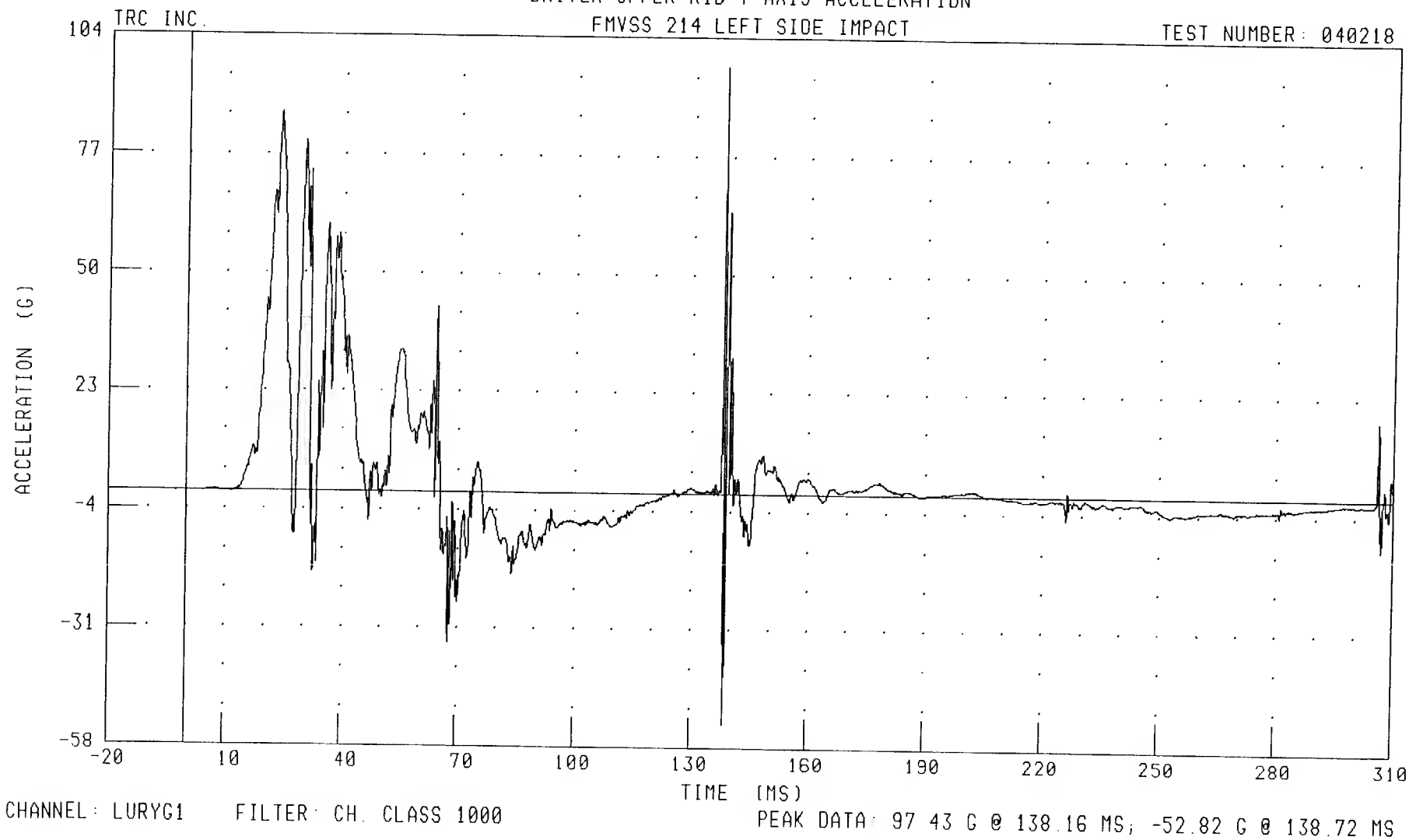
B-24

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



B-25

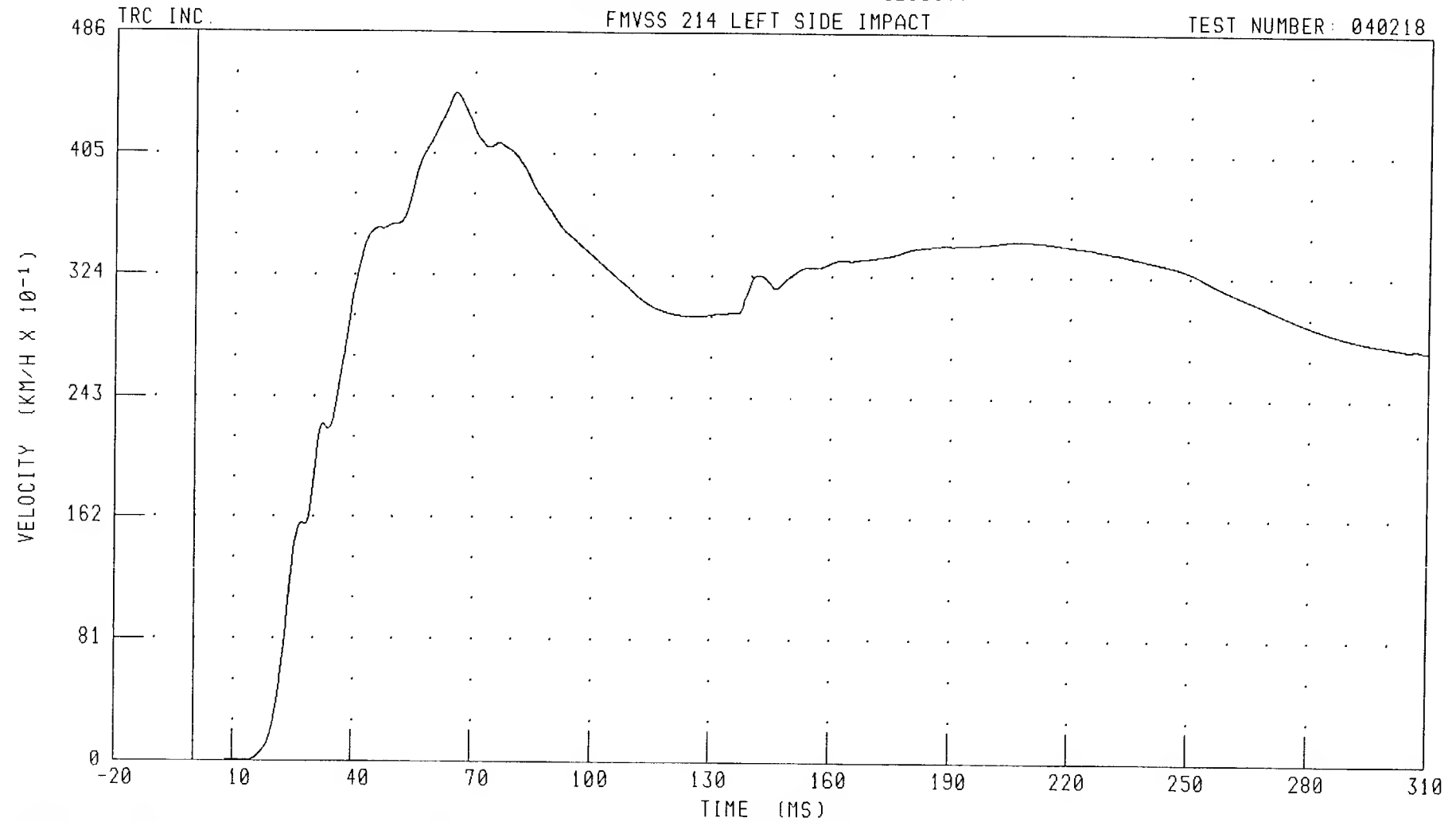
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER UPPER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYV1 FILTER: CH. CLASS 180

PEAK DATA: 44.60 KM/H @ 65.60 MS; 0.00 KM/H @ 0.00 MS

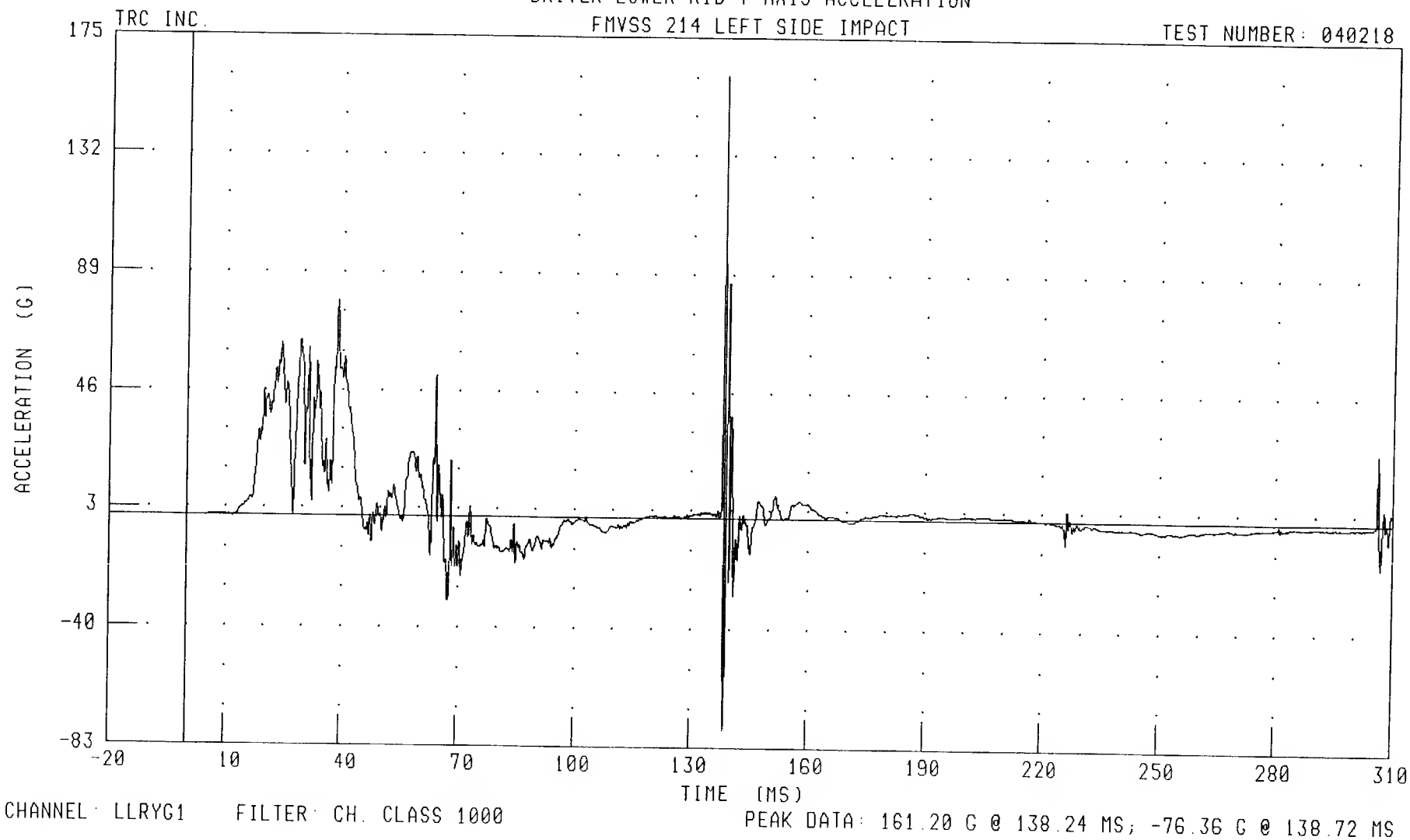
B-26

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



B-27

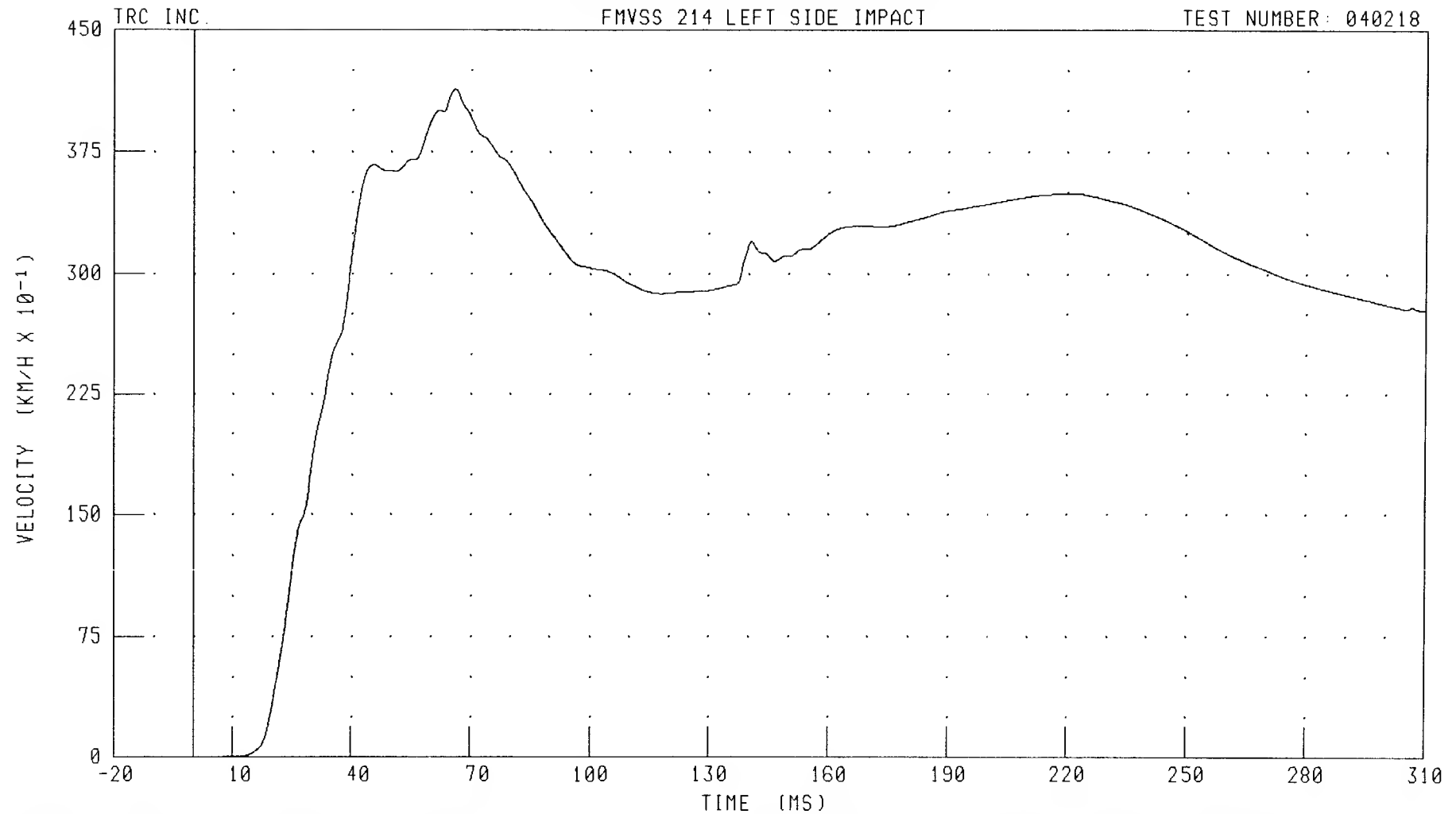
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER LOWER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYV1 FILTER: CH. CLASS 180

PEAK DATA: 41.31 KM/H @ 66.00 MS; 0.00 KM/H @ 0.00 MS

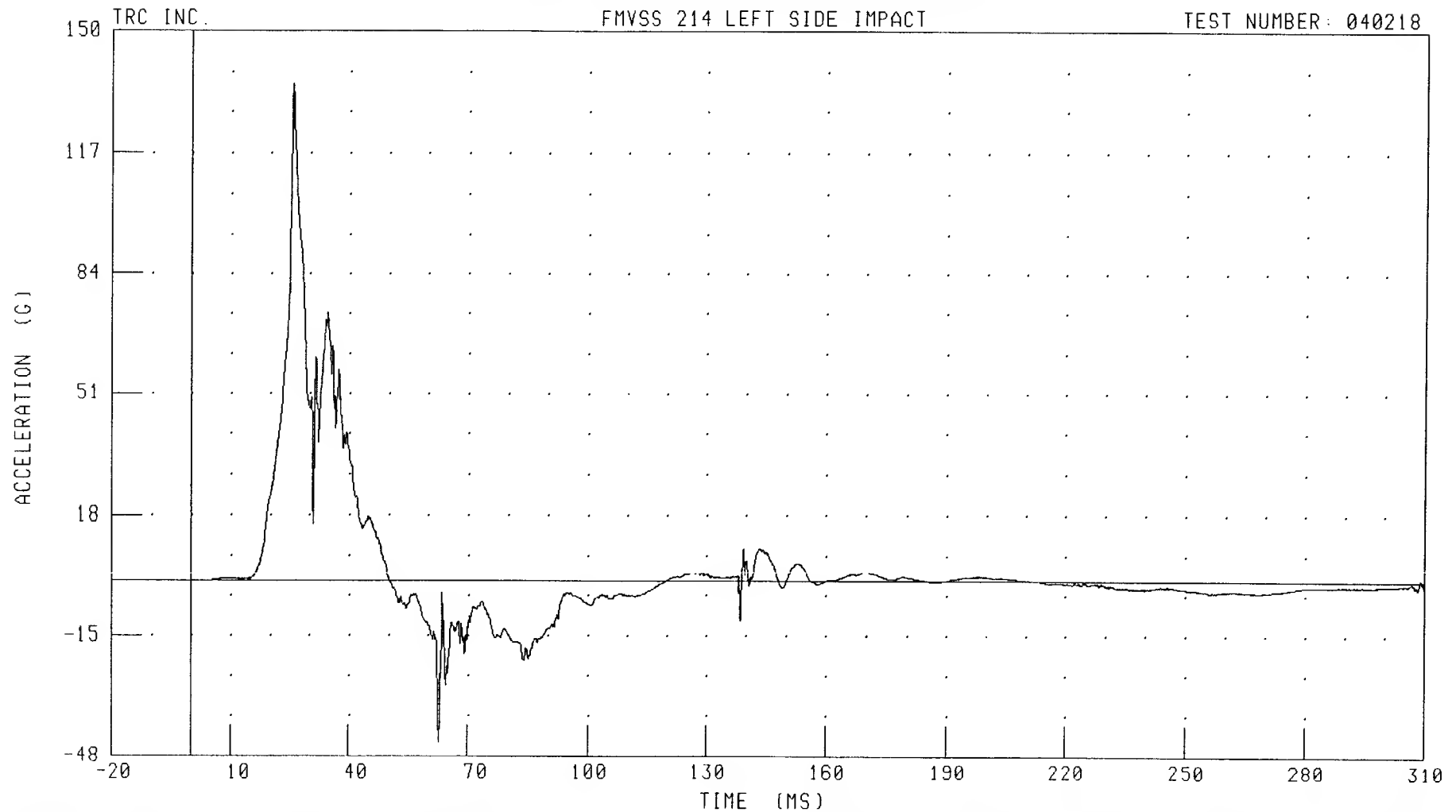
B-28

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YC1 FILTER: CH. CLASS 1000

PEAK DATA: 135.94 G @ 25.68 MS; -44.51 G @ 62.72 MS

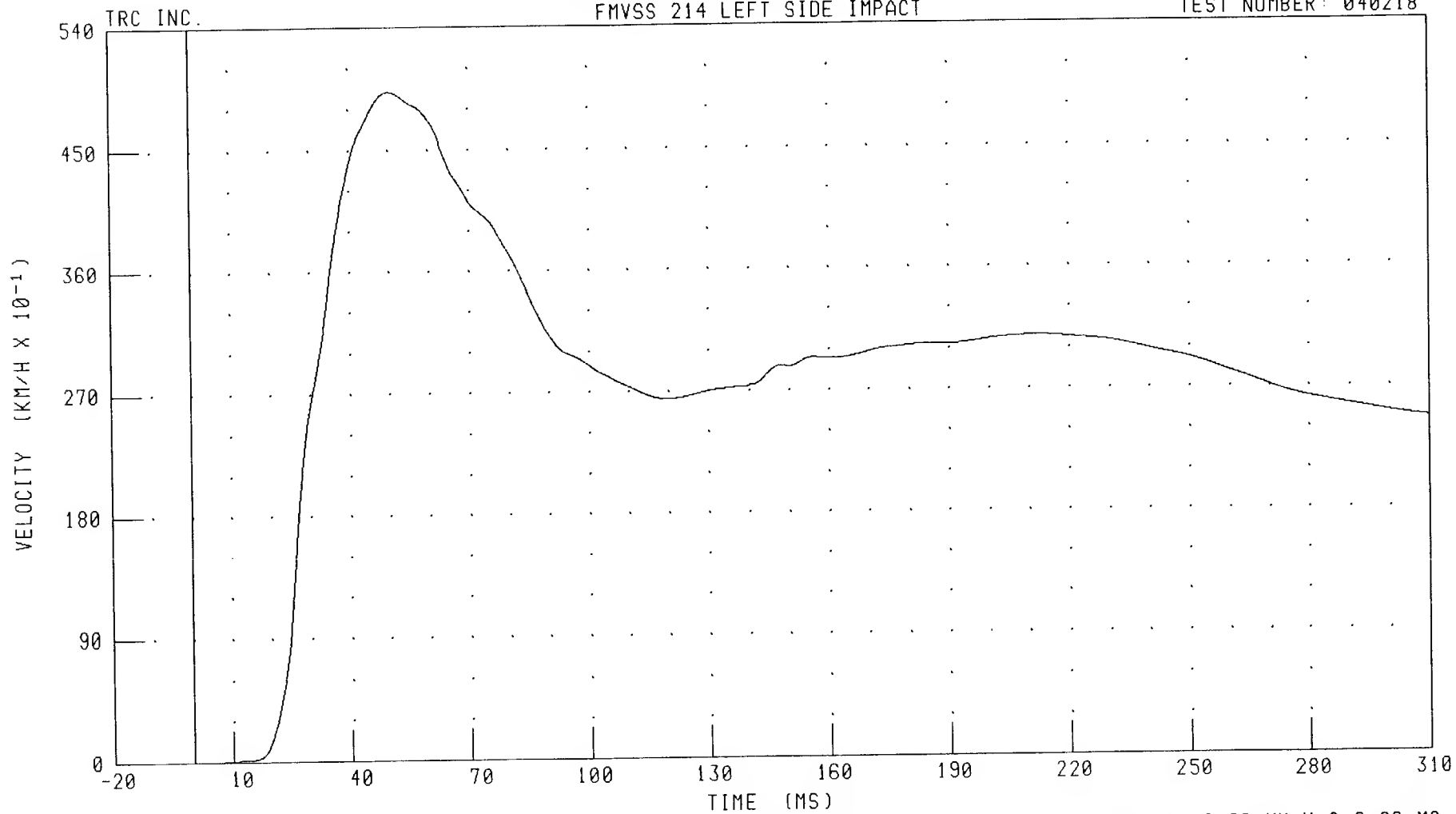
B-29

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER SPINE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YV1

FILTER: CH. CLASS 100

PEAK DATA: 49.26 KM/H @ 50.32 MS; 0.00 KM/H @ 0.00 MS

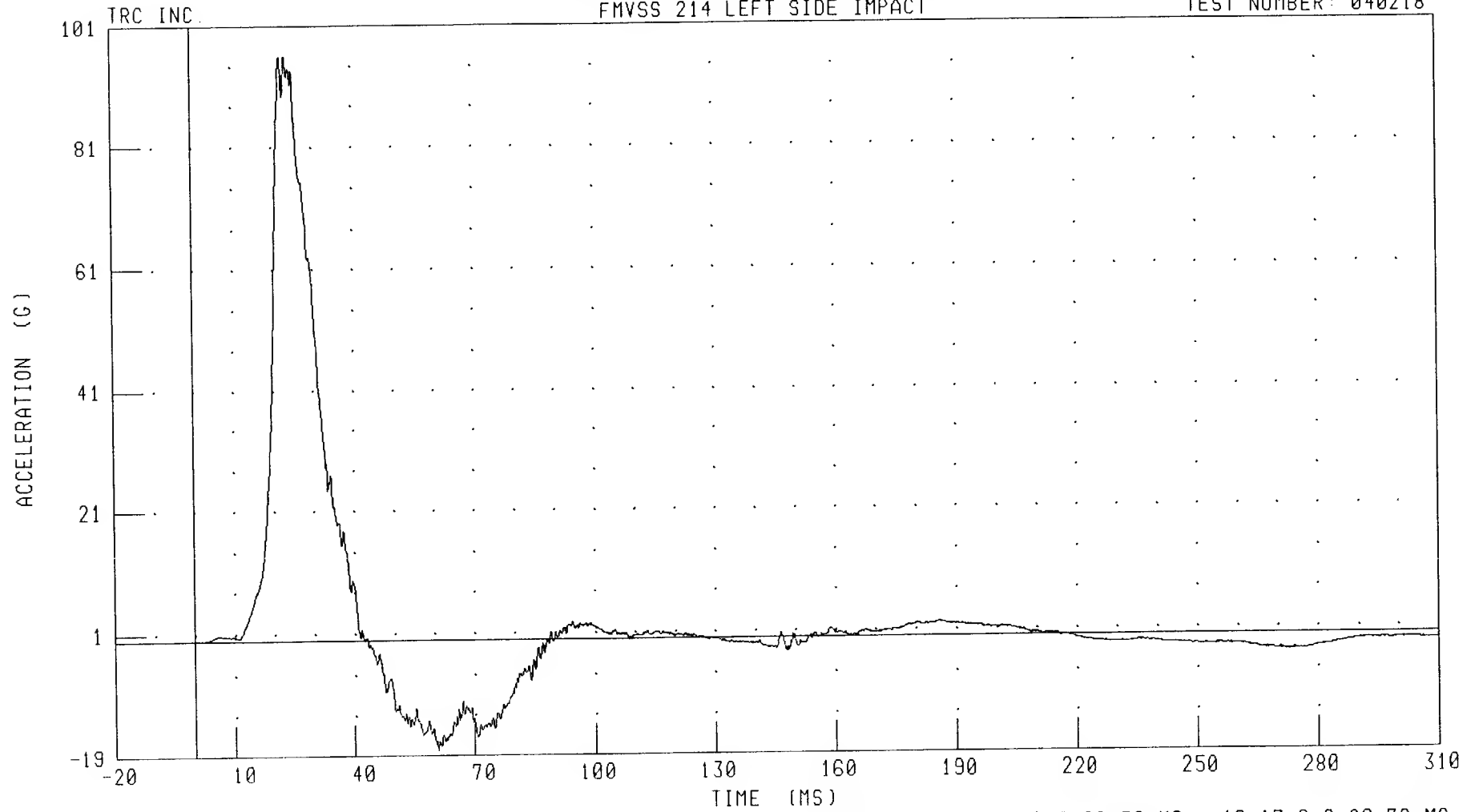
B-30

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYG1 FILTER: CH. CLASS 1000

B-31

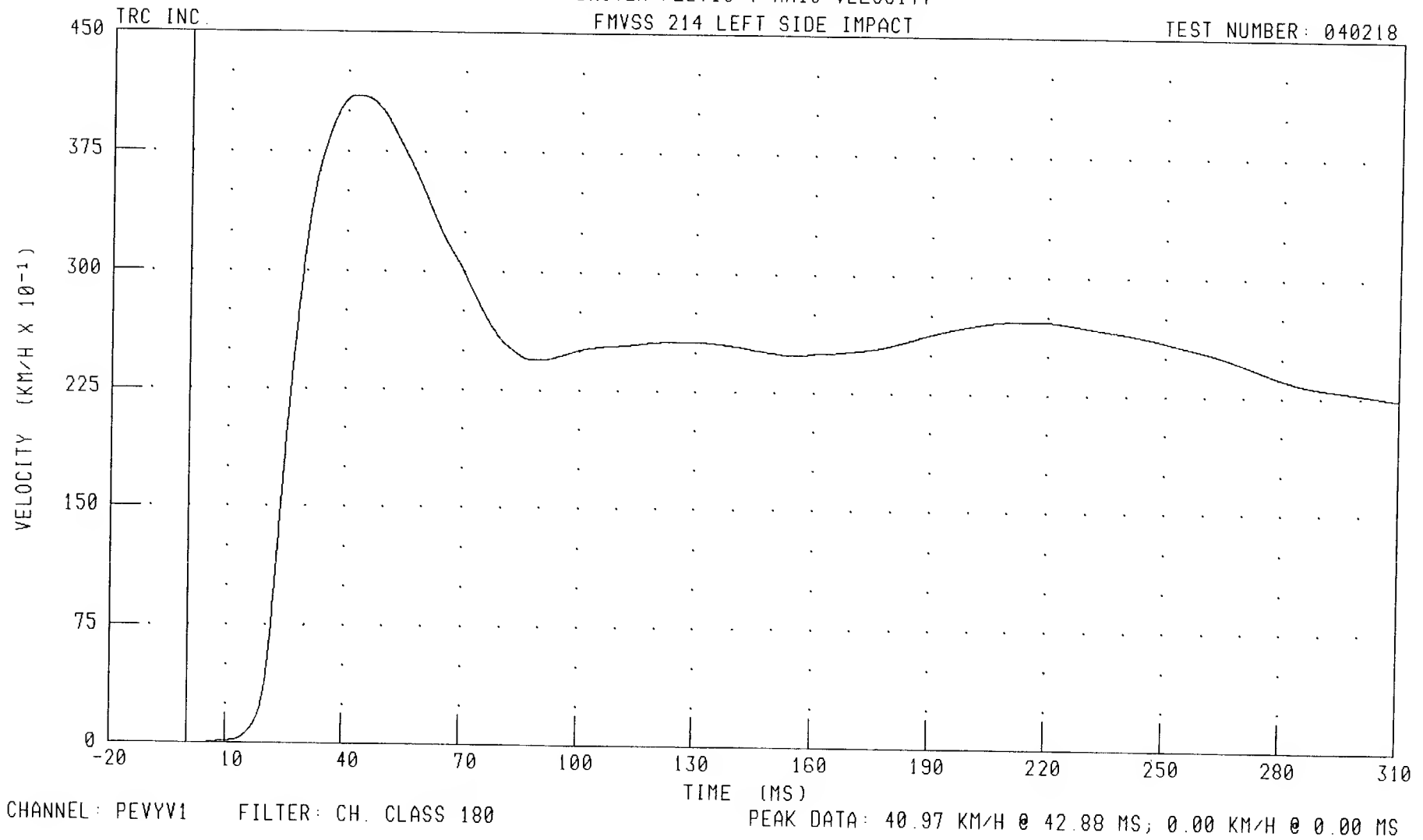
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER PELVIS Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



B-32

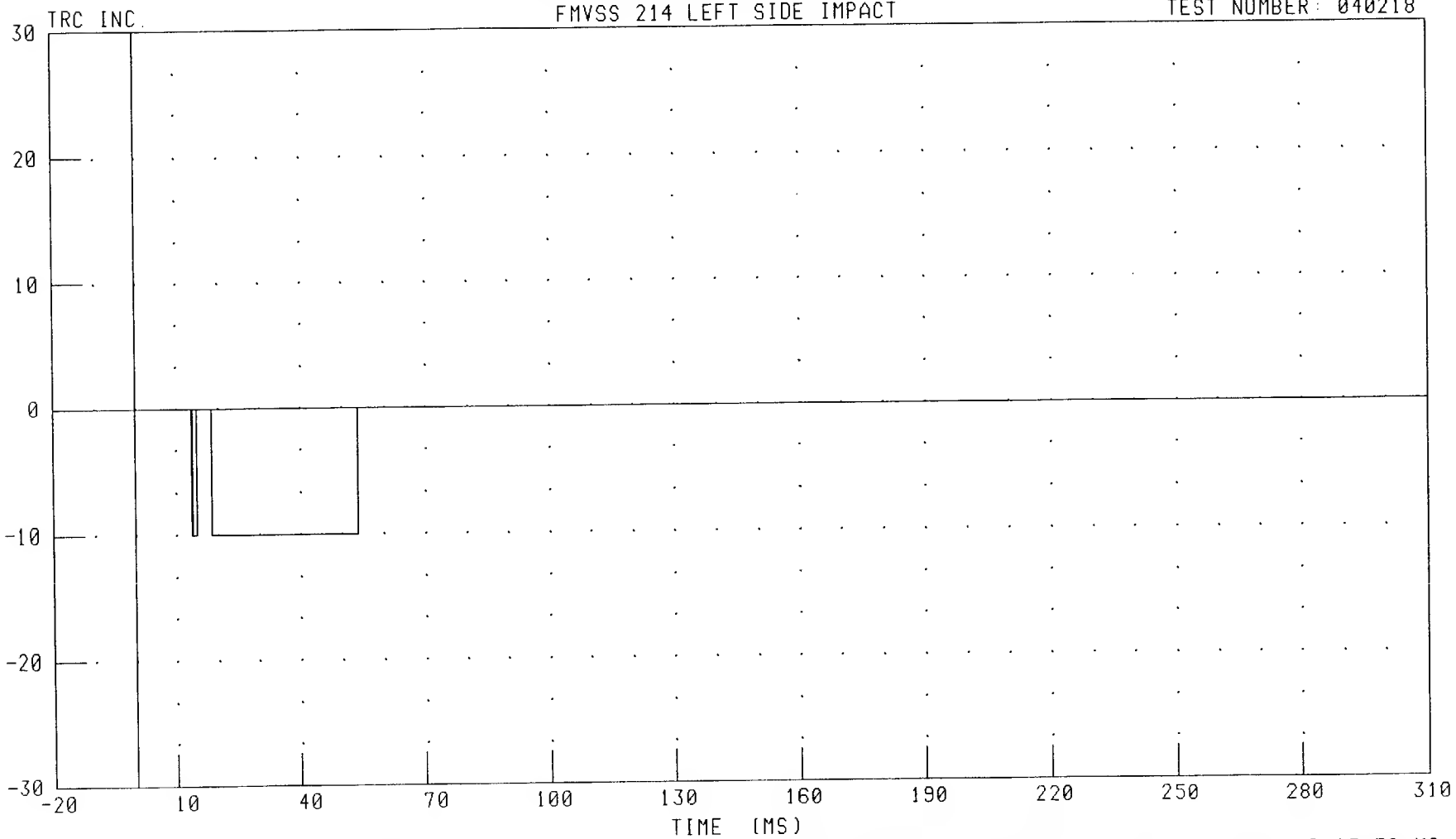
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER SHOULDER CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: SHLET1 FILTER: CH. CLASS 1000

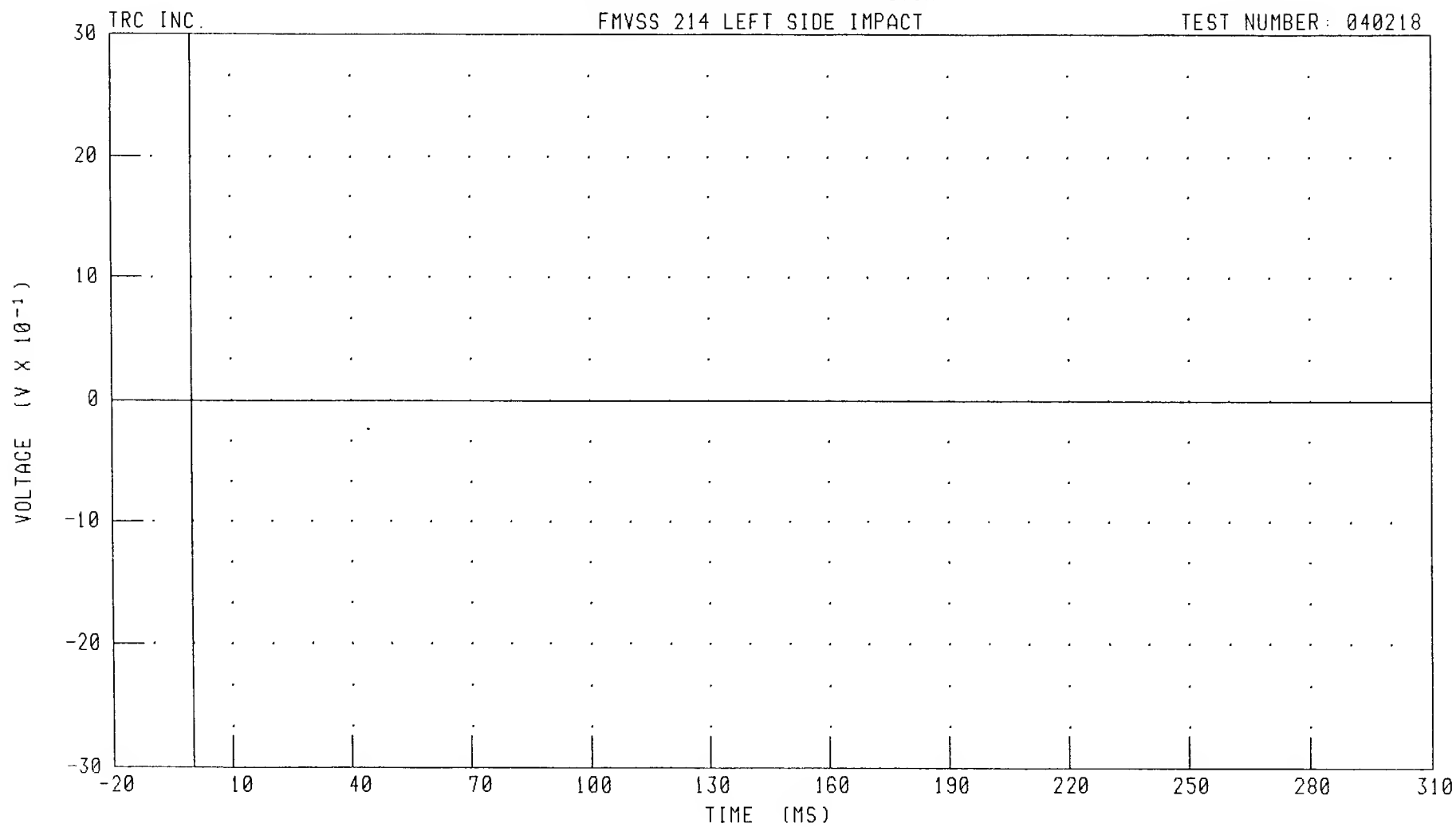
PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 13.76 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER PELVIS CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVET1

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

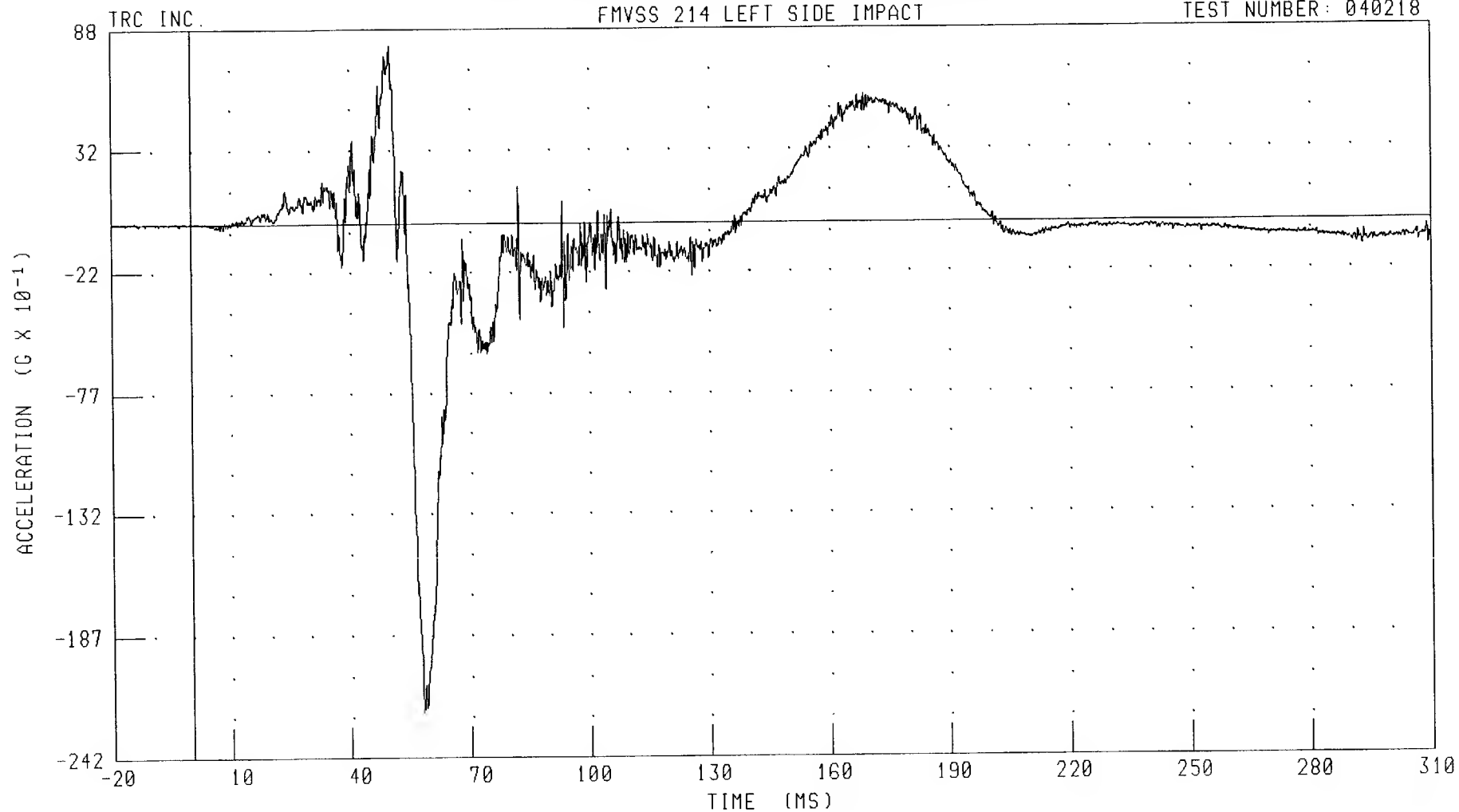
B-34

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXG4 FILTER: CH. CLASS 1000

PEAK DATA: 8.07 G @ 50.08 MS; -22.22 G @ 58.00 MS

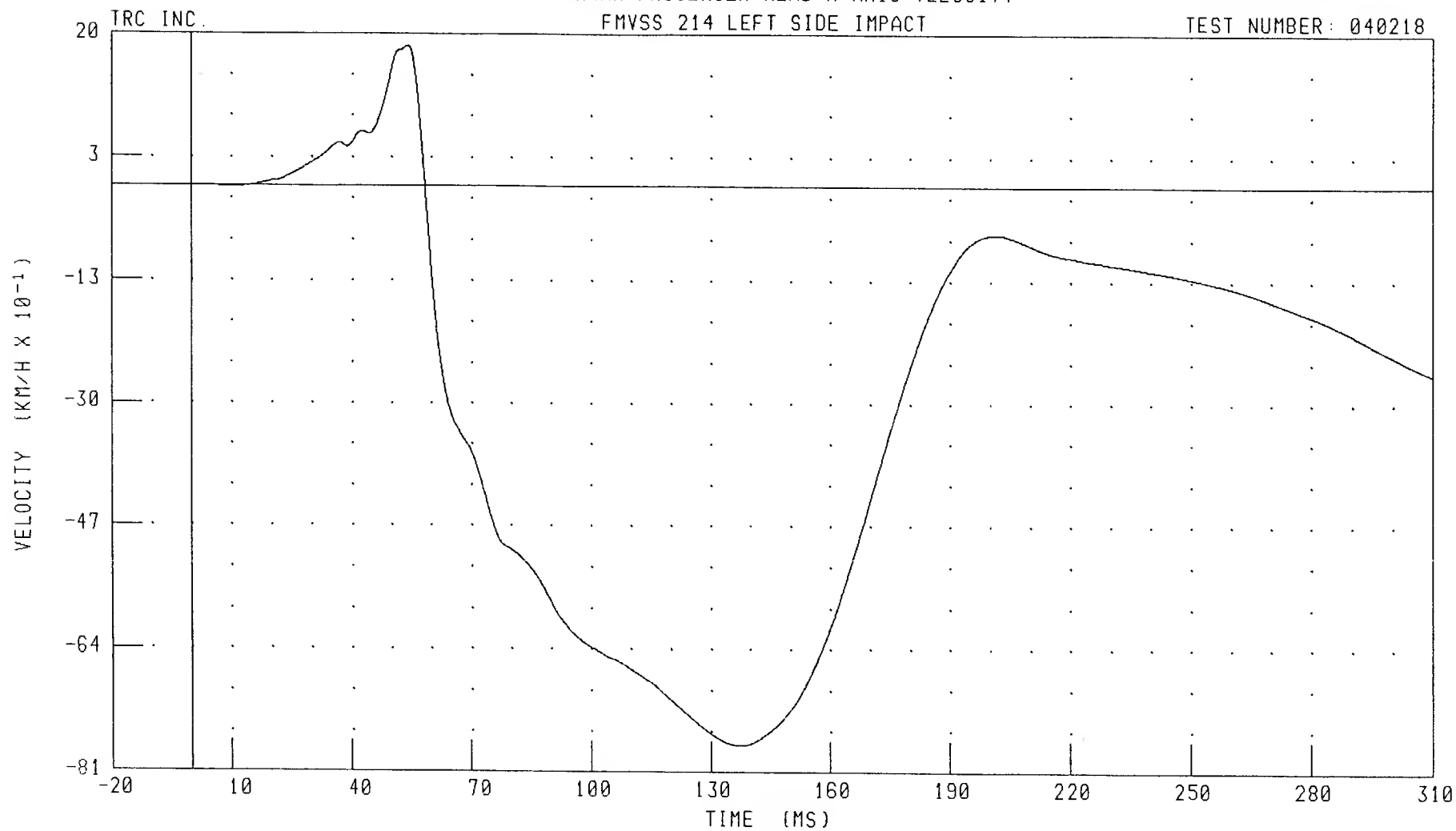
B-35

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXV4

FILTER: CH. CLASS 180

PEAK DATA: 1.94 KM/H @ 54.00 MS, -7.73 KM/H @ 137.84 MS

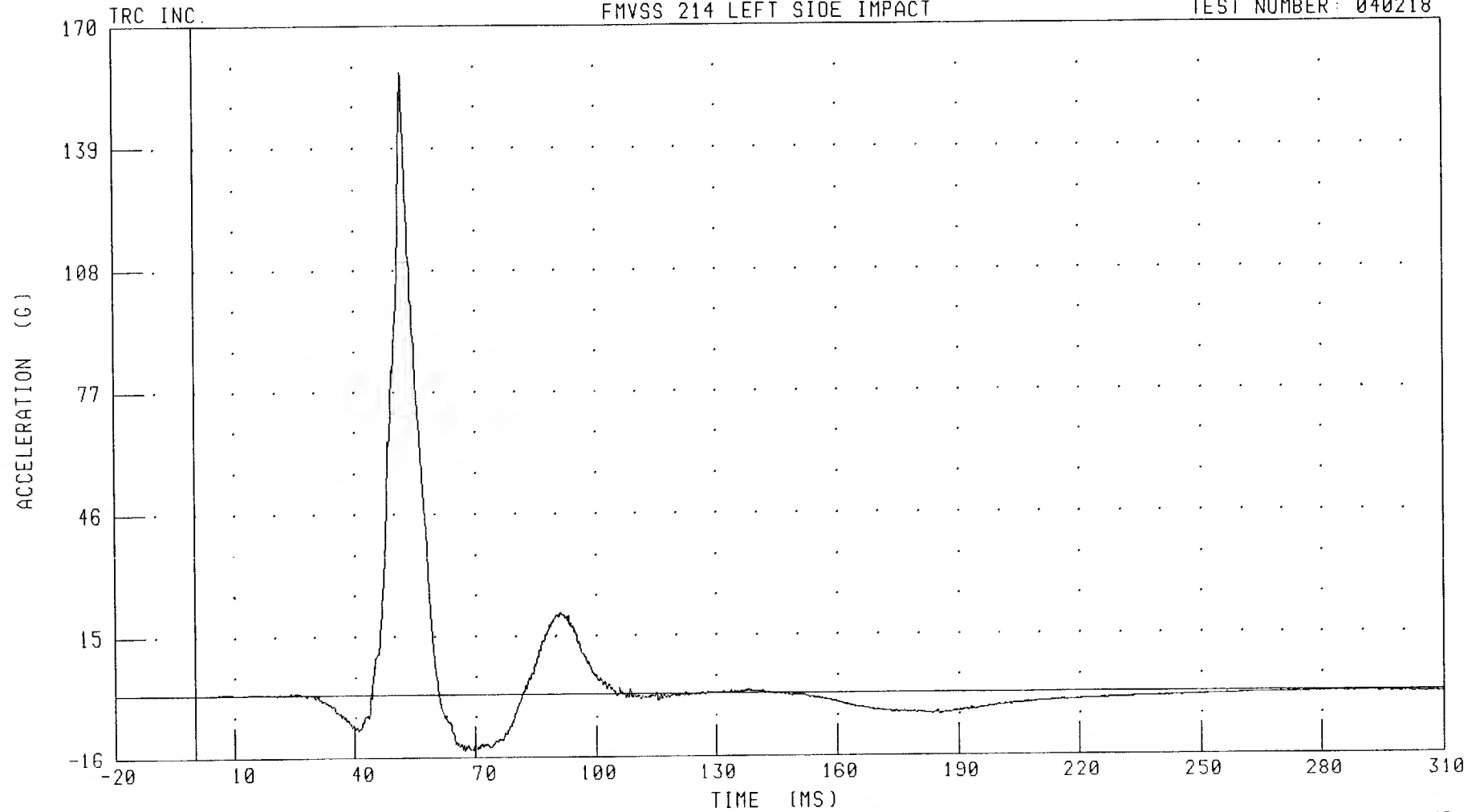
B-36

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYG4 FILTER: CH. CLASS 1000

PEAK DATA: 158.24 G @ 52.16 MS; -14.55 G @ 67.36 MS

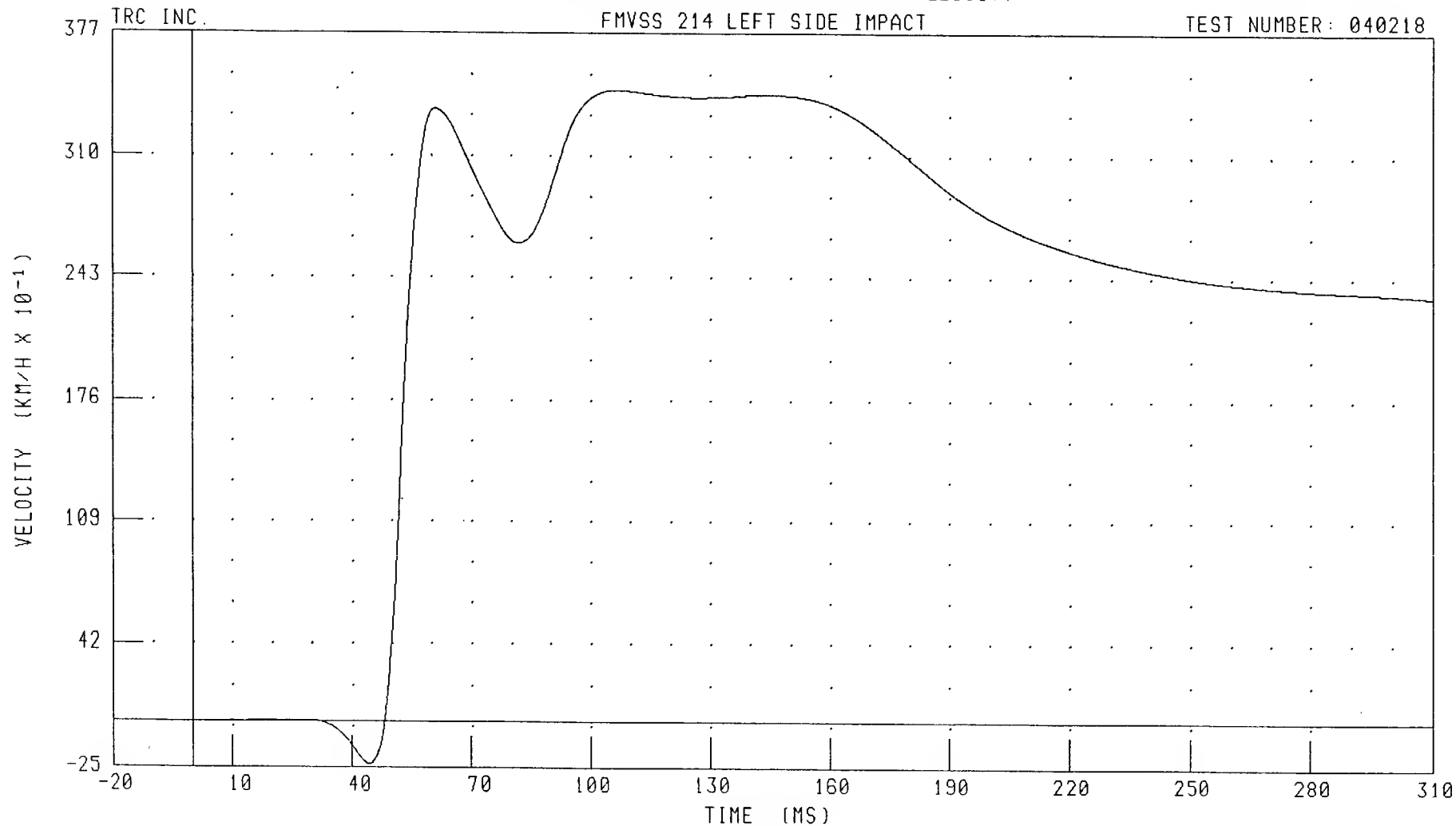
B-37

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYV4 FILTER: CH. CLASS 180

PEAK DATA: 34.61 KM/H @ 106.64 MS; -2.35 KM/H @ 44.32 MS

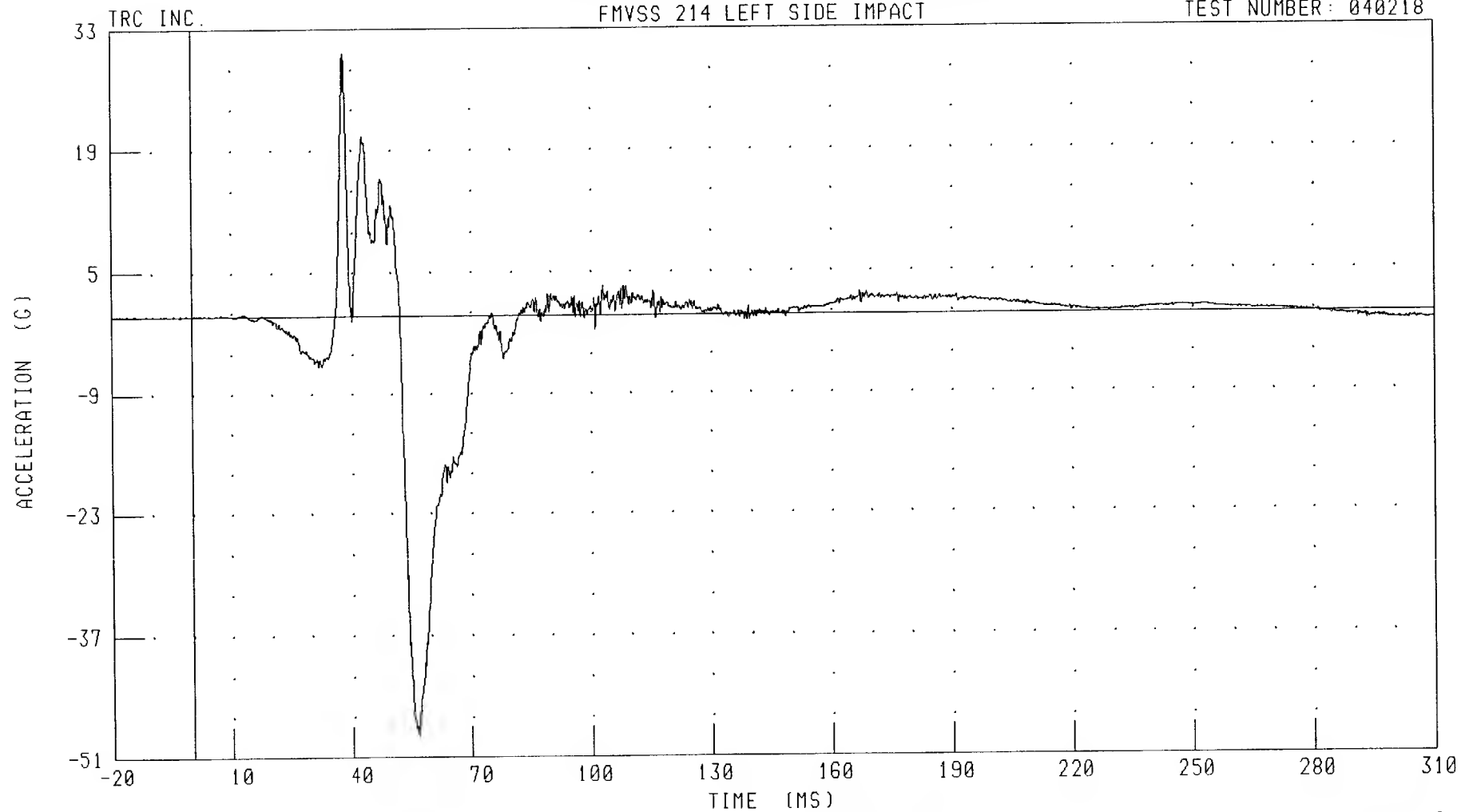
B-38

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZG4 FILTER: CH. CLASS 1000

PEAK DATA: 30.24 G @ 38.16 MS; -48.62 G @ 56.64 MS

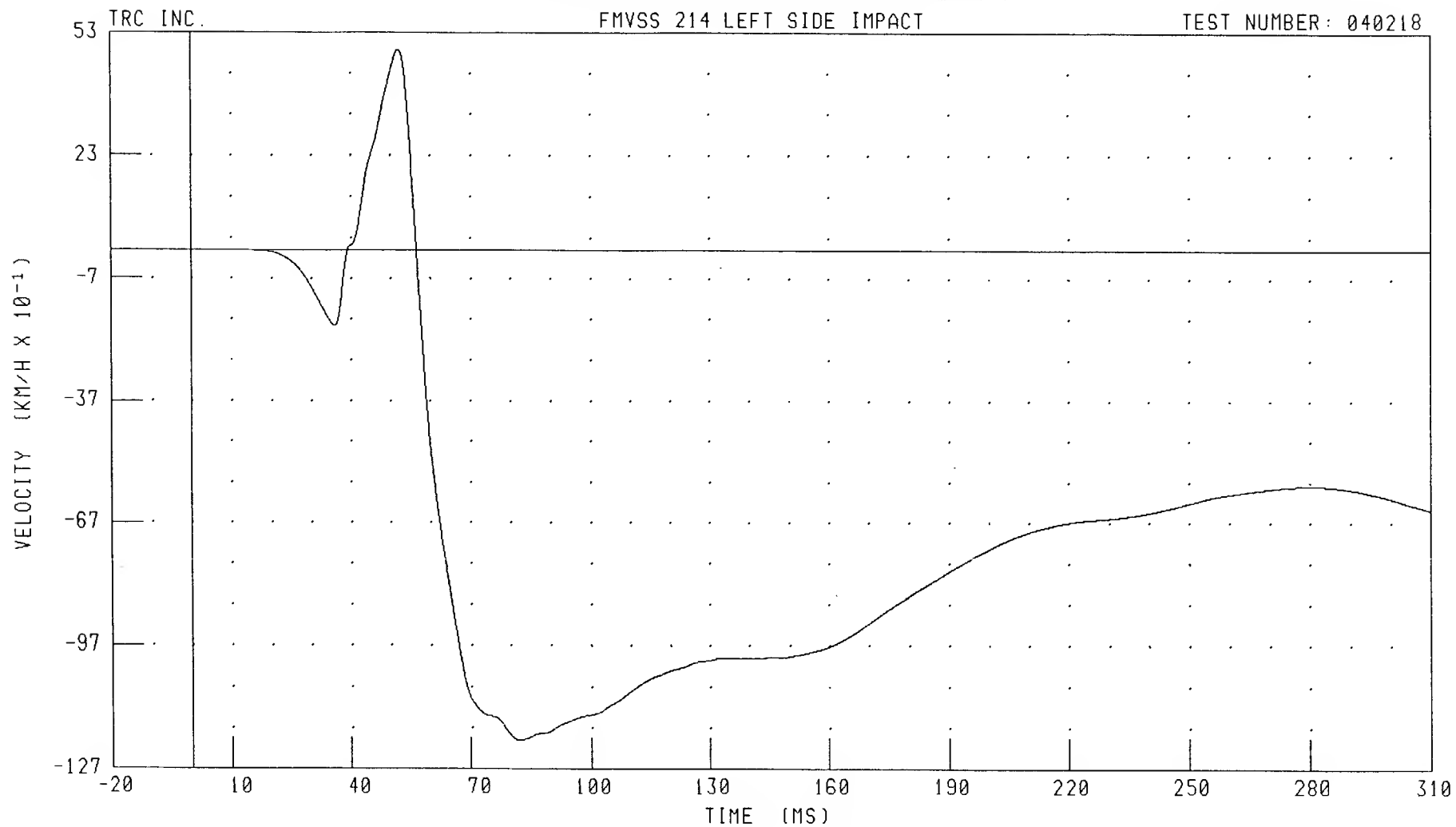
B-39

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZV4 FILTER: CH. CLASS 180

PEAK DATA: 4.89 KM/H @ 52.24 MS; -12.00 KM/H @ 82.24 MS

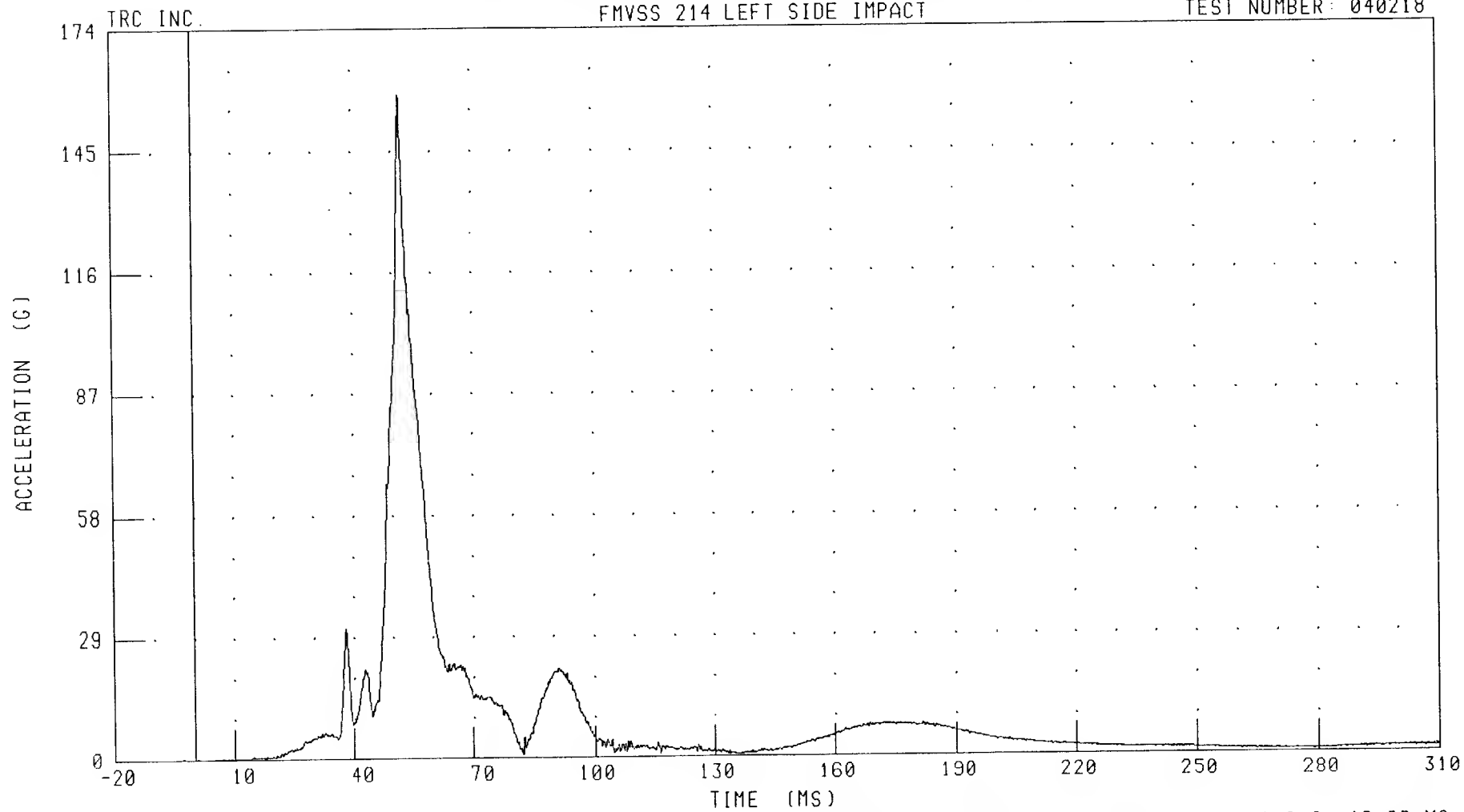
B-40

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDRG4 FILTER: CH CLASS 1000

PEAK DATA: 158.25 G @ 52.16 MS; 0.01 G @ -18.96 MS

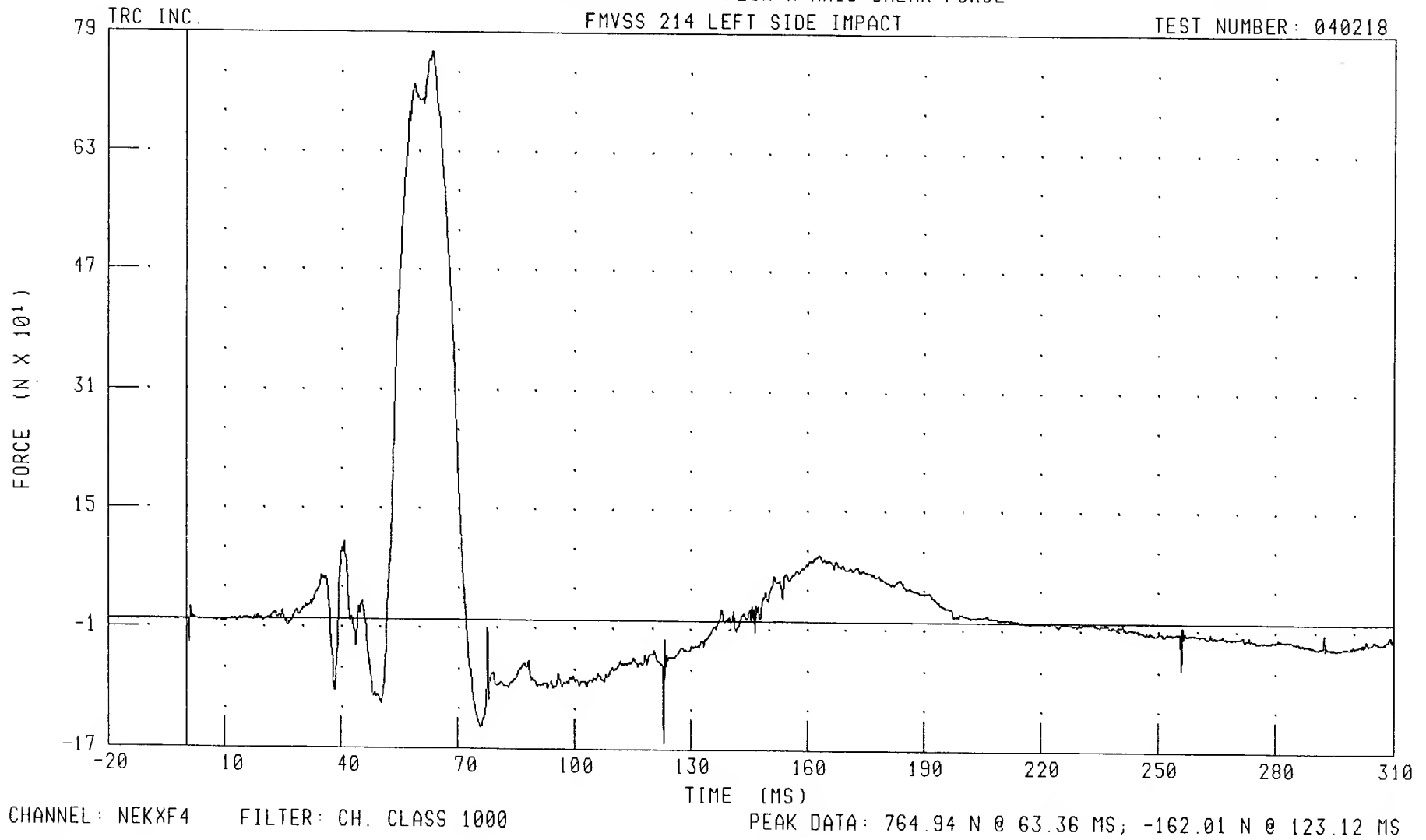
B-41

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK X-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



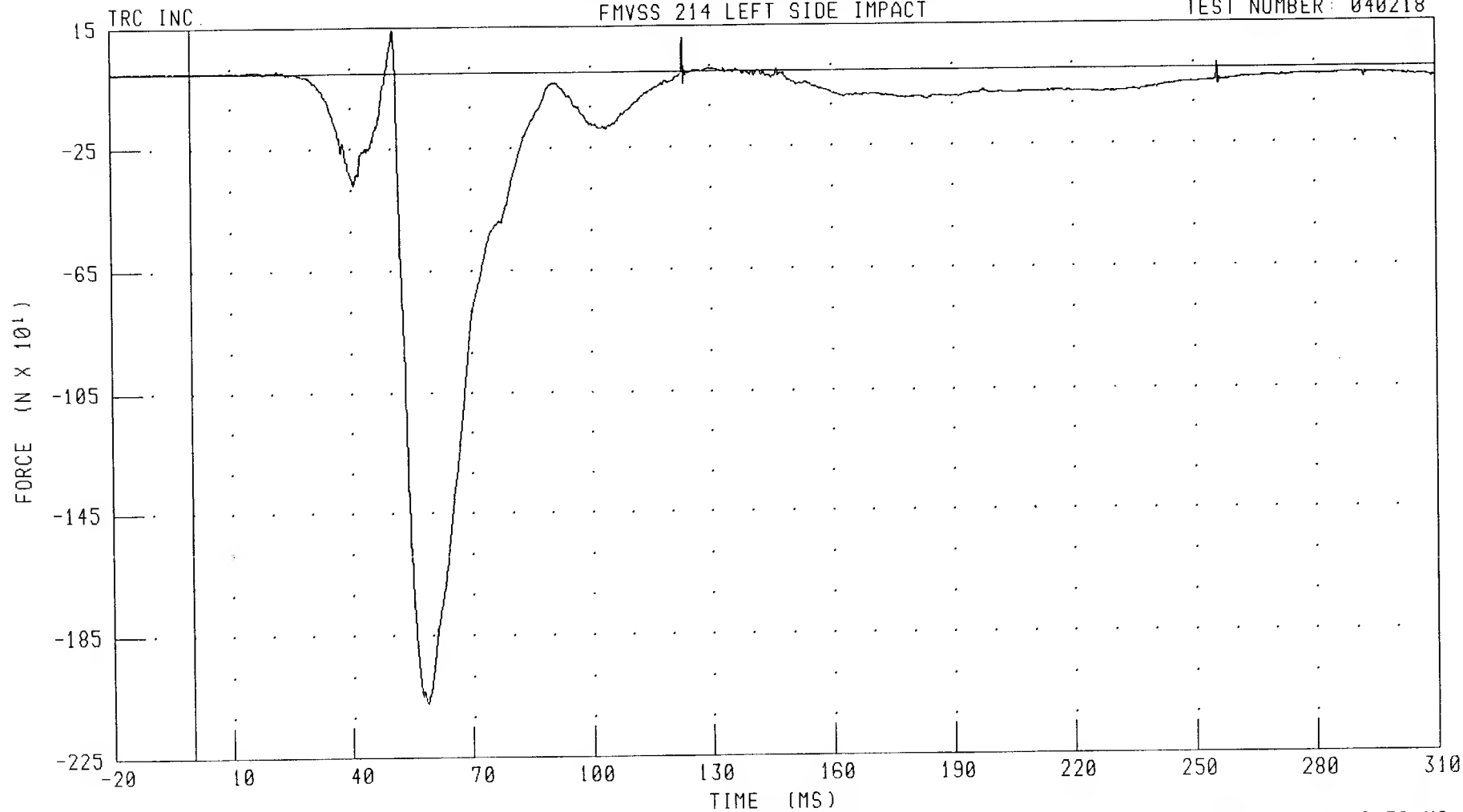
B-42

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK Y-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKYF4 FILTER: CH. CLASS 1000

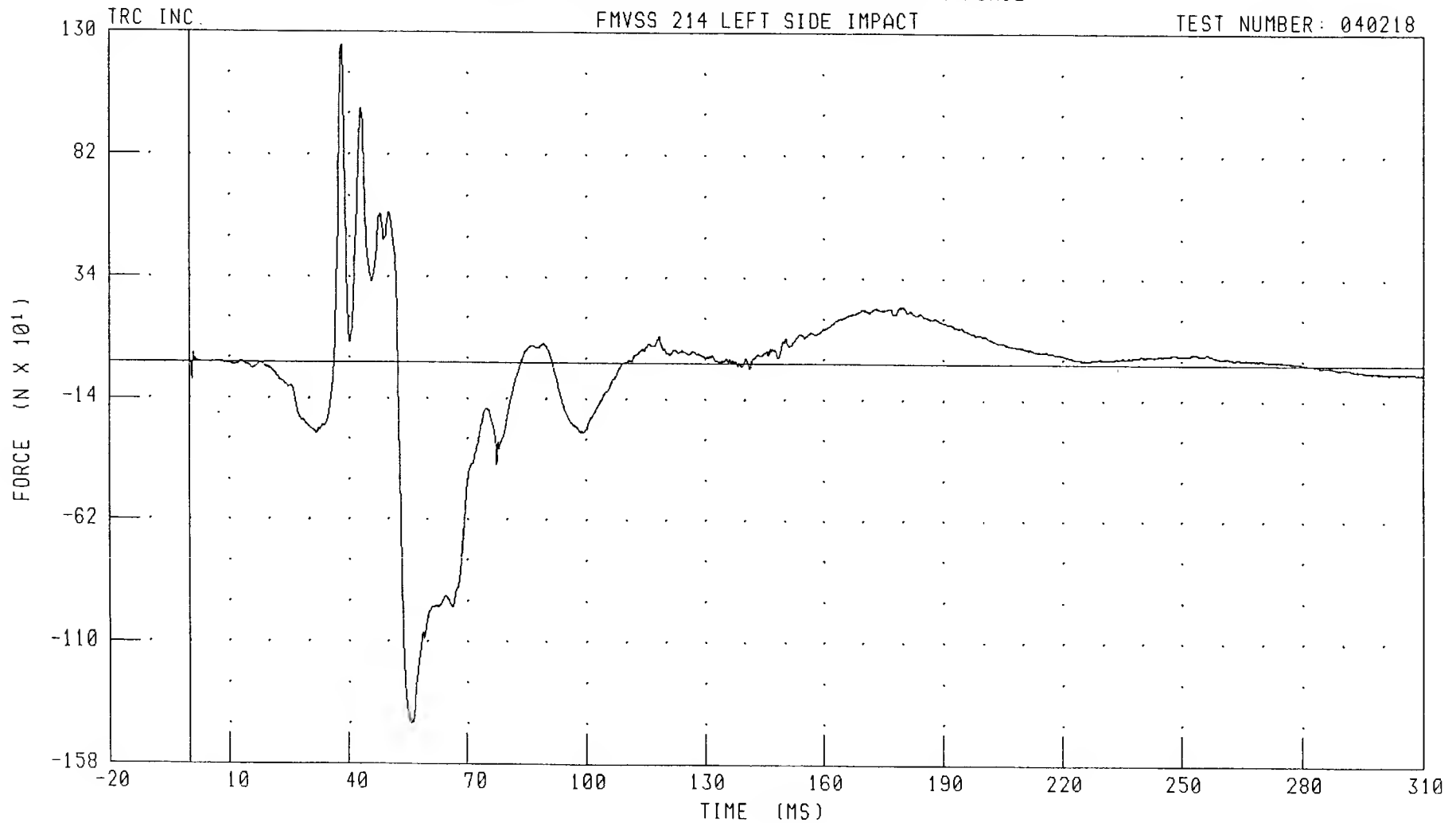
B-43

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK Z-AXIS AXIAL FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKZF4 FILTER: CH. CLASS 1000

PEAK DATA: 1246.85 N @ 38.32 MS; -1420.23 N @ 56.00 MS

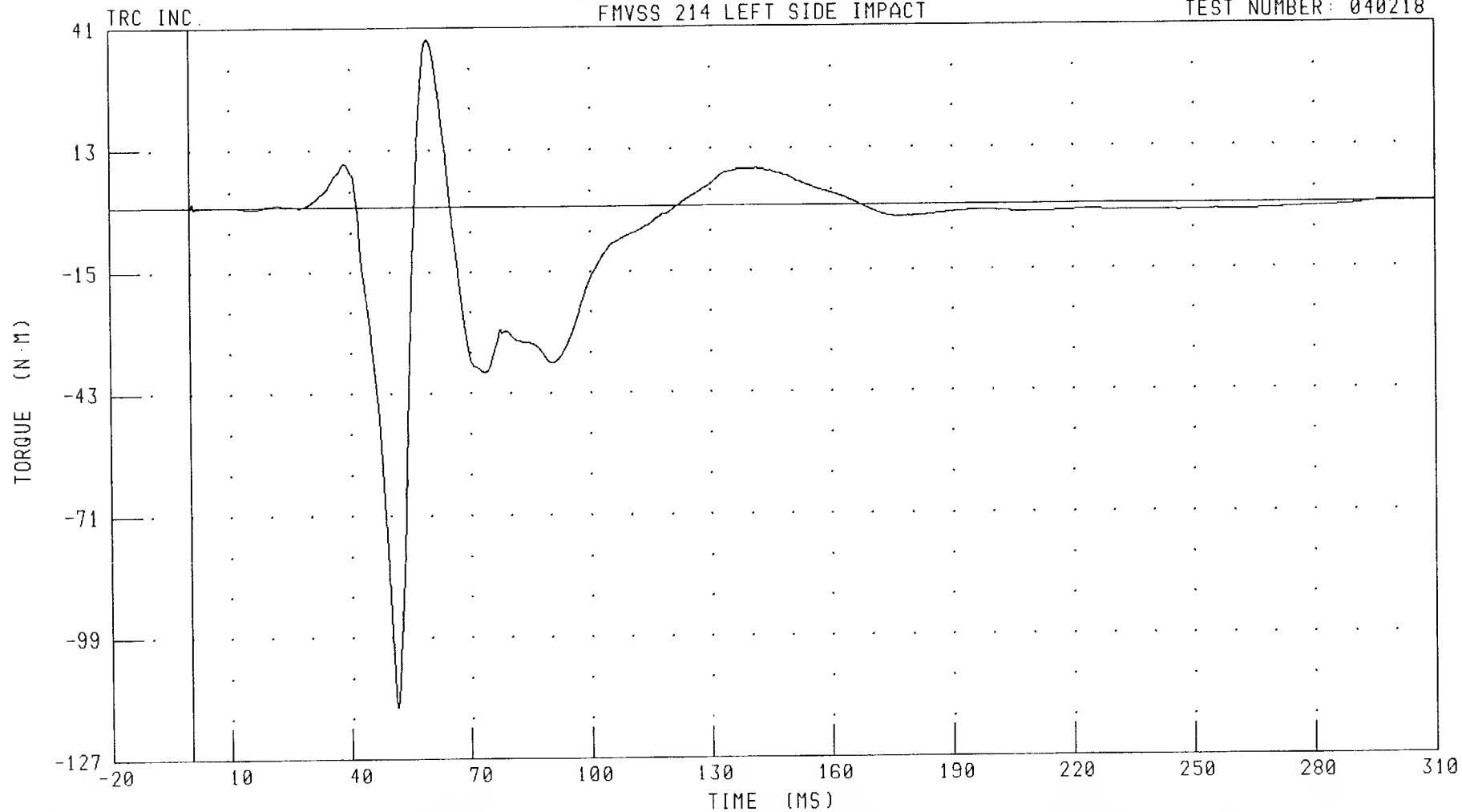
B-44

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKXM4 FILTER: CH. CLASS 600

PEAK DATA: 38.18 N·M @ 59.68 MS; -115.28 N·M @ 51.52 MS

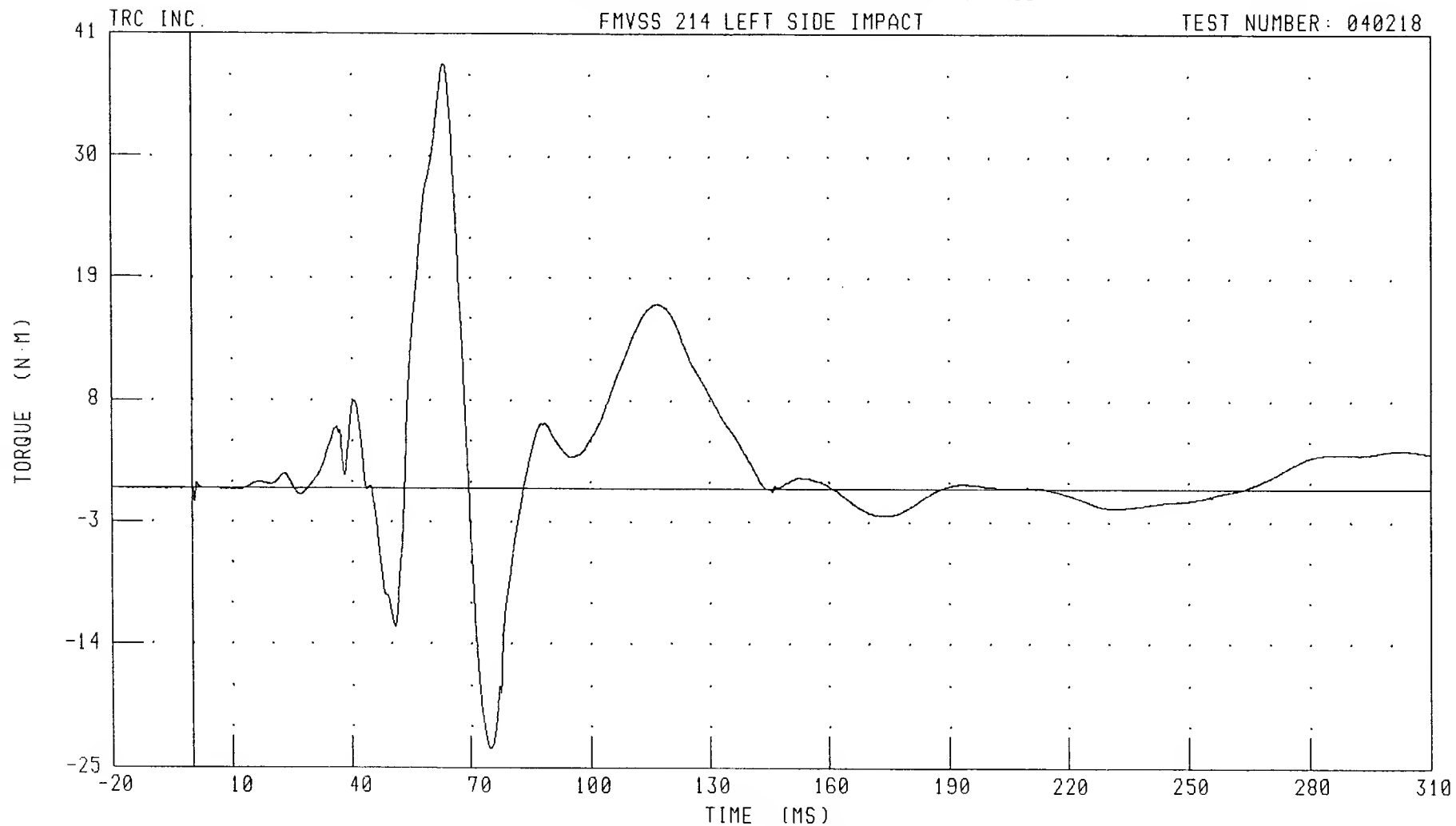
B-45

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK MOMENT ABOUT Y AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKYM4

FILTER: CH. CLASS 600

PEAK DATA: 38.26 N·M @ 63.68 MS; -23.30 N·M @ 74.88 MS

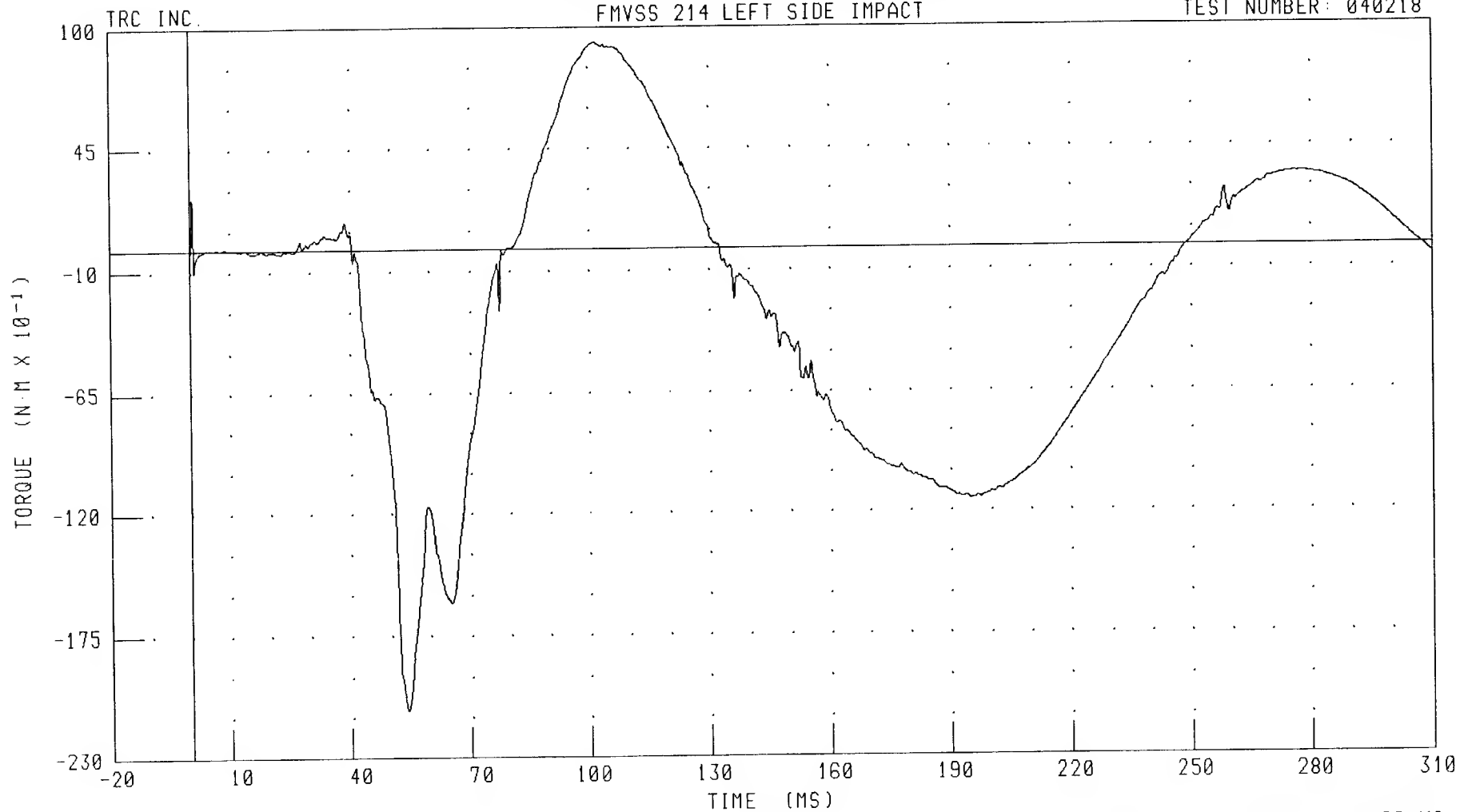
B-46

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK MOMENT ABOUT Z AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NEKZM4 FILTER: CH. CLASS 600

PEAK DATA: 9.32 N·M @ 101.76 MS; -20.87 N·M @ 54.00 MS

B-47

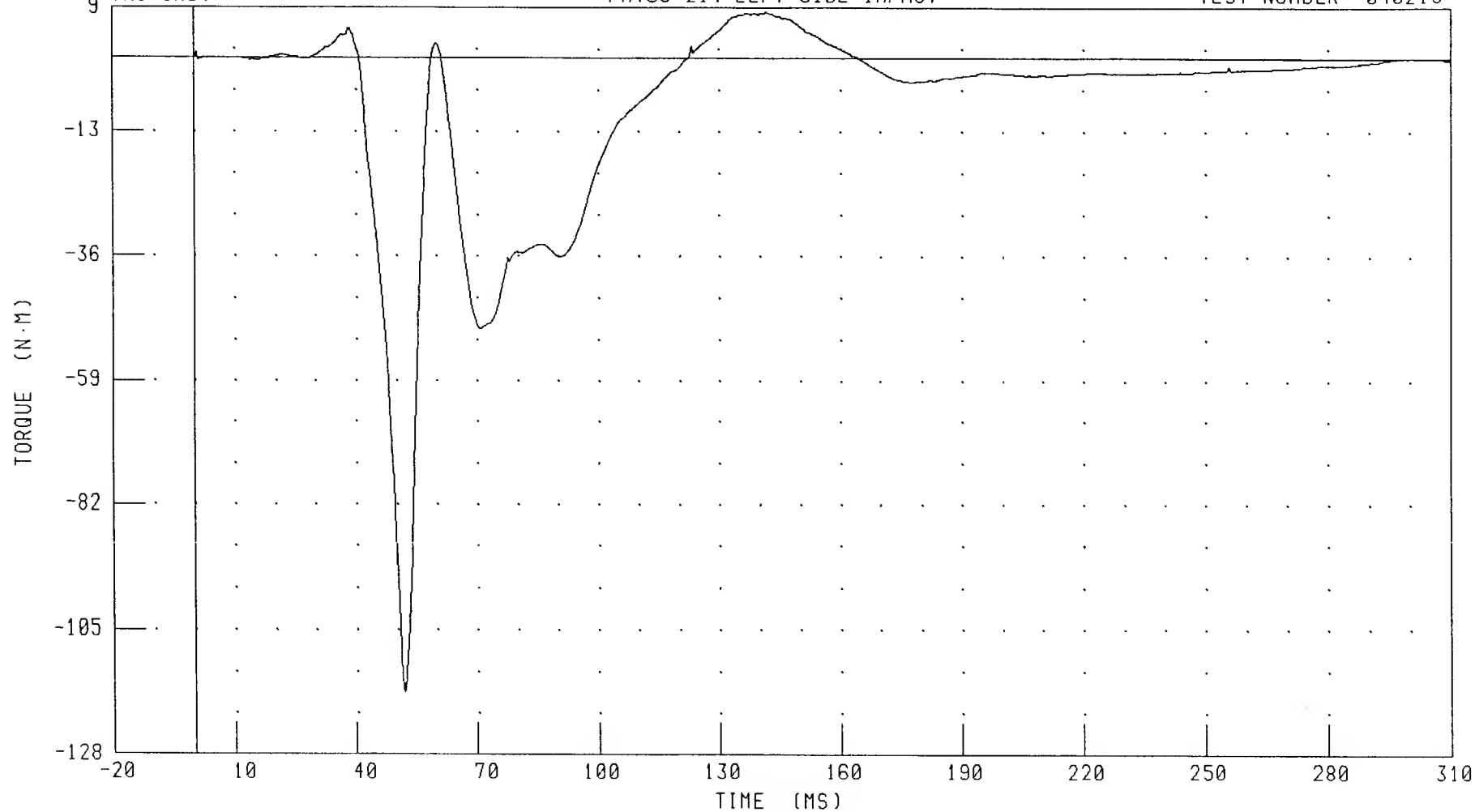
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS

TRC INC.

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: NK0XM4

FILTER: CH. CLASS 600

PEAK DATA: 8.48 N·M @ 141.68 MS; -117.20 N·M @ 51.84 MS

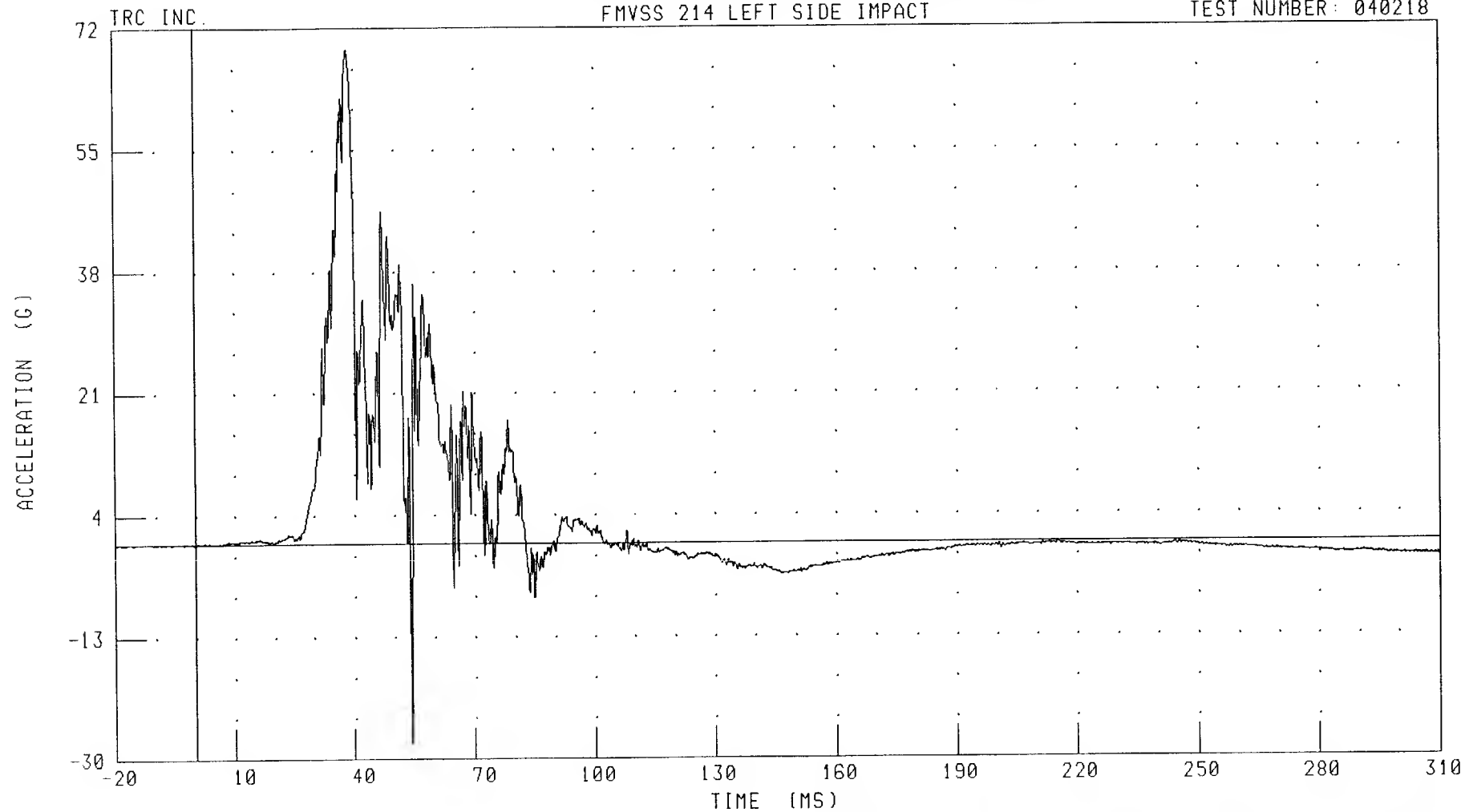
B-48

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYG4 FILTER: CH. CLASS 1000

PEAK DATA: 69.01 G @ 38.56 MS; -27.93 G @ 54.24 MS

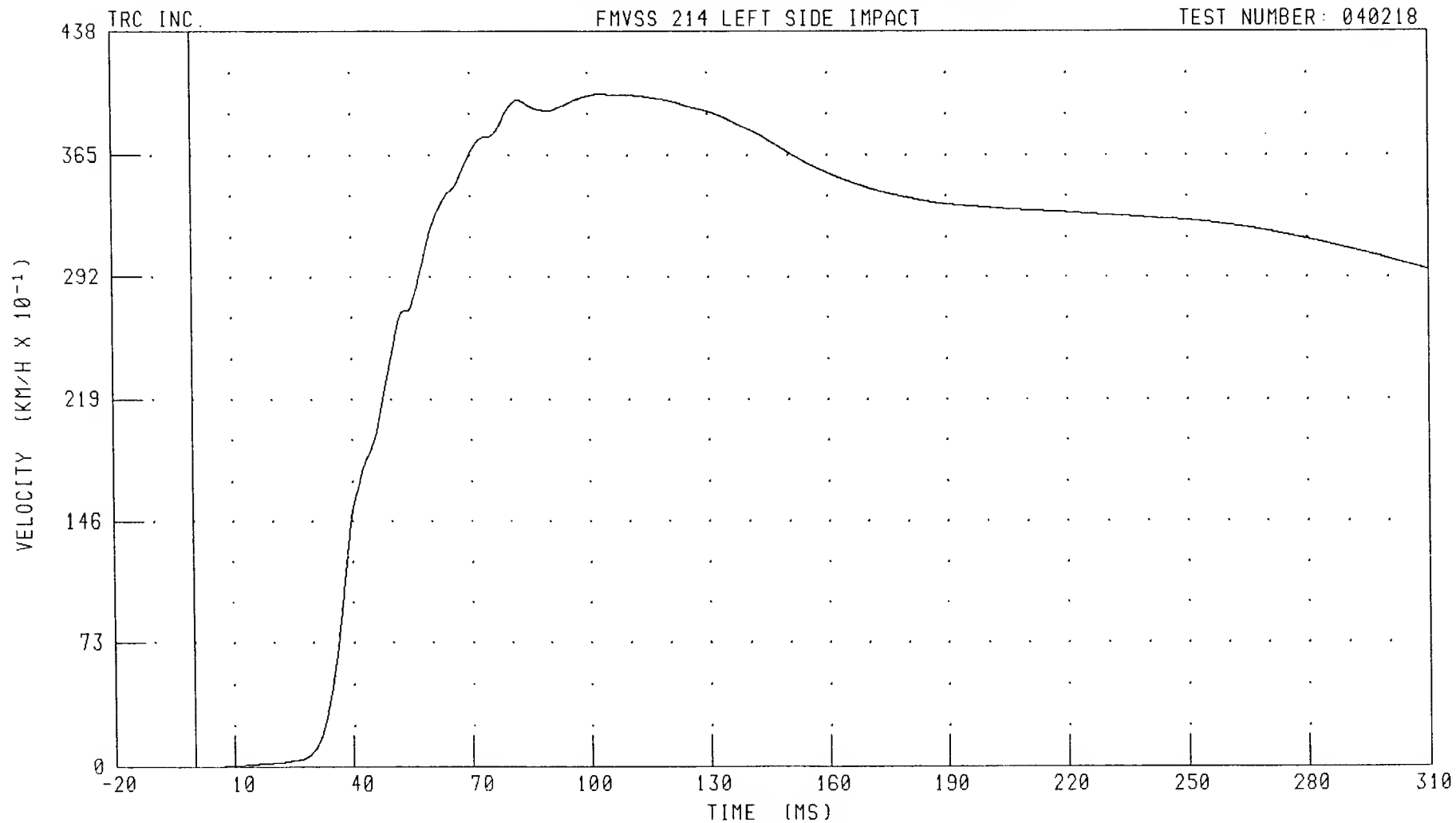
B-49

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYV4

FILTER: CH. CLASS 180

PEAK DATA: 40.09 KM/H @ 103.04 MS; 0.00 KM/H @ 0.00 MS

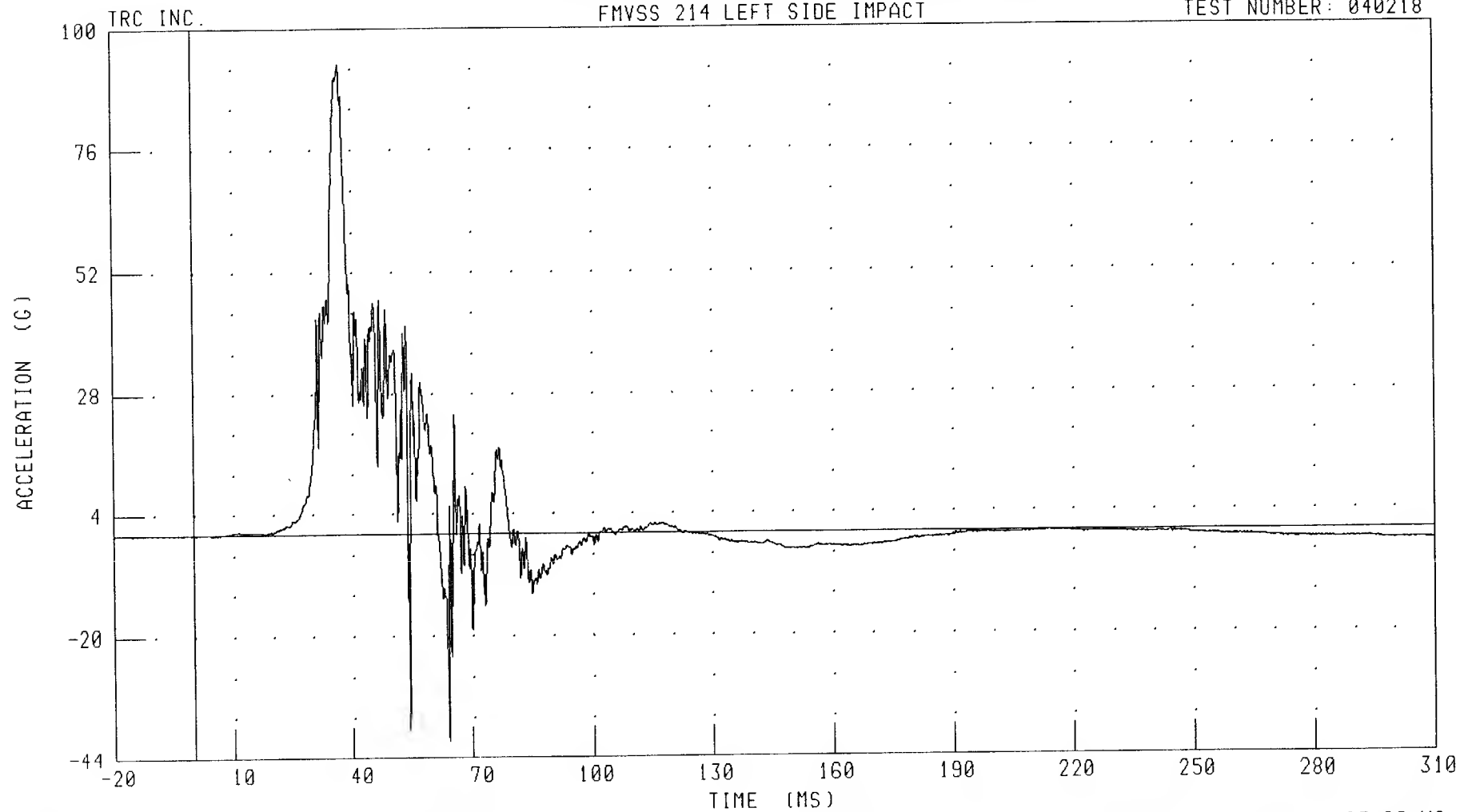
B-50

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYG4 FILTER: CH. CLASS 1000

PEAK DATA: 92.92 G @ 37.12 MS; -40.80 G @ 63.92 MS

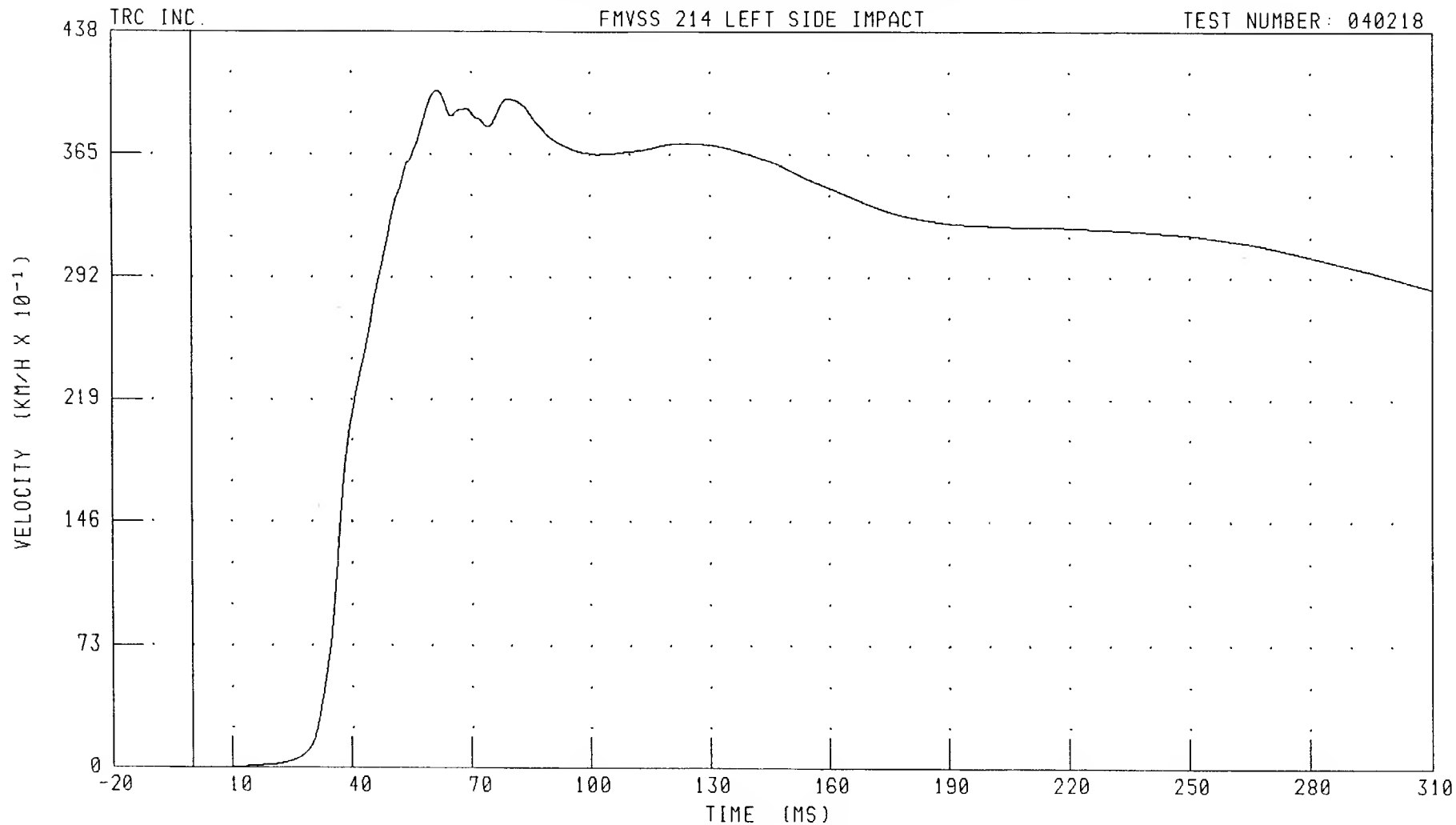
B-51

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYV4 FILTER: CH. CLASS 180

PEAK DATA: 40.25 KM/H @ 61.52 MS; 0.00 KM/H @ 0.00 MS

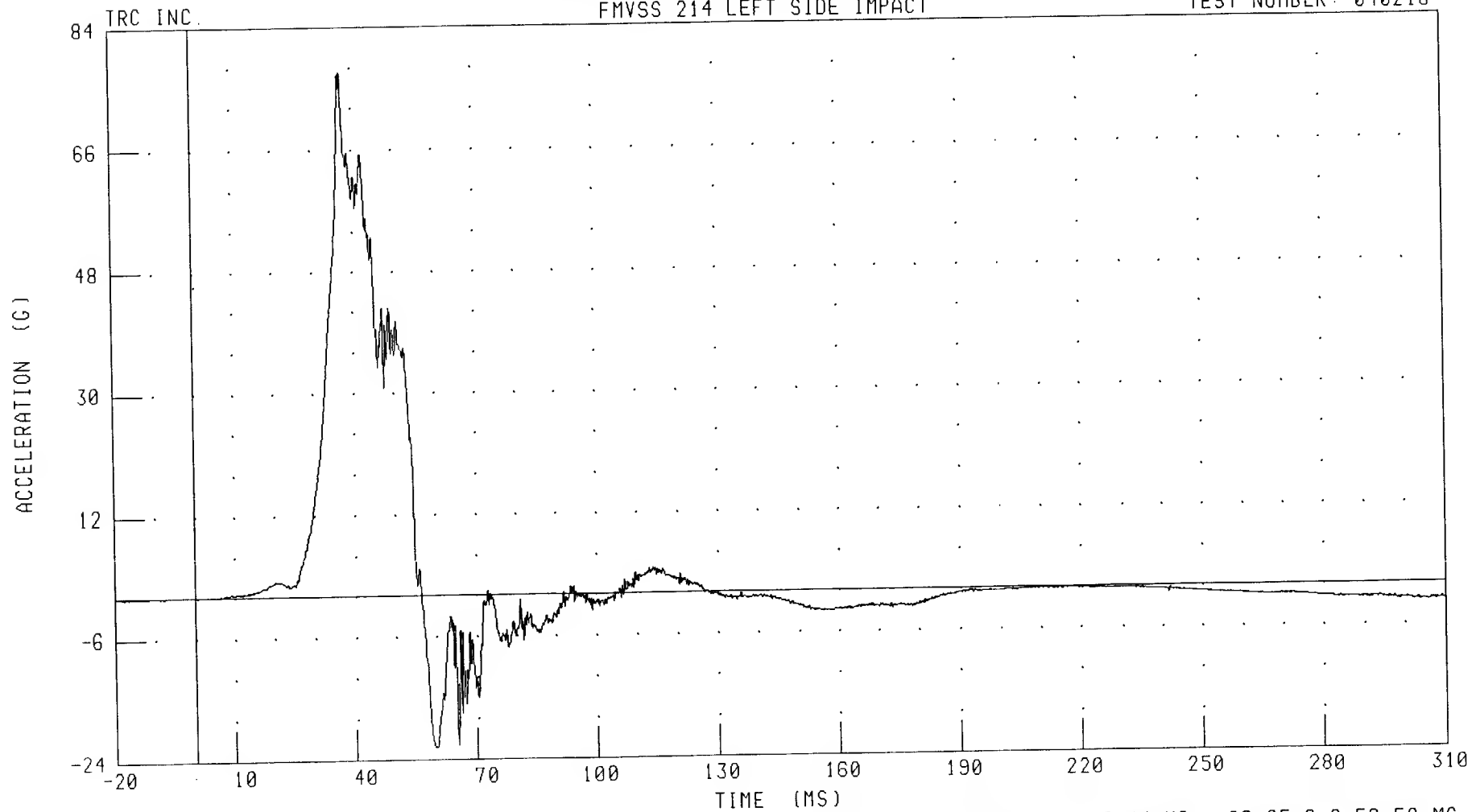
B-52

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YG4 FILTER: CH. CLASS 1000

PEAK DATA: 77.35 G @ 37.44 MS; -22.25 G @ 59.52 MS

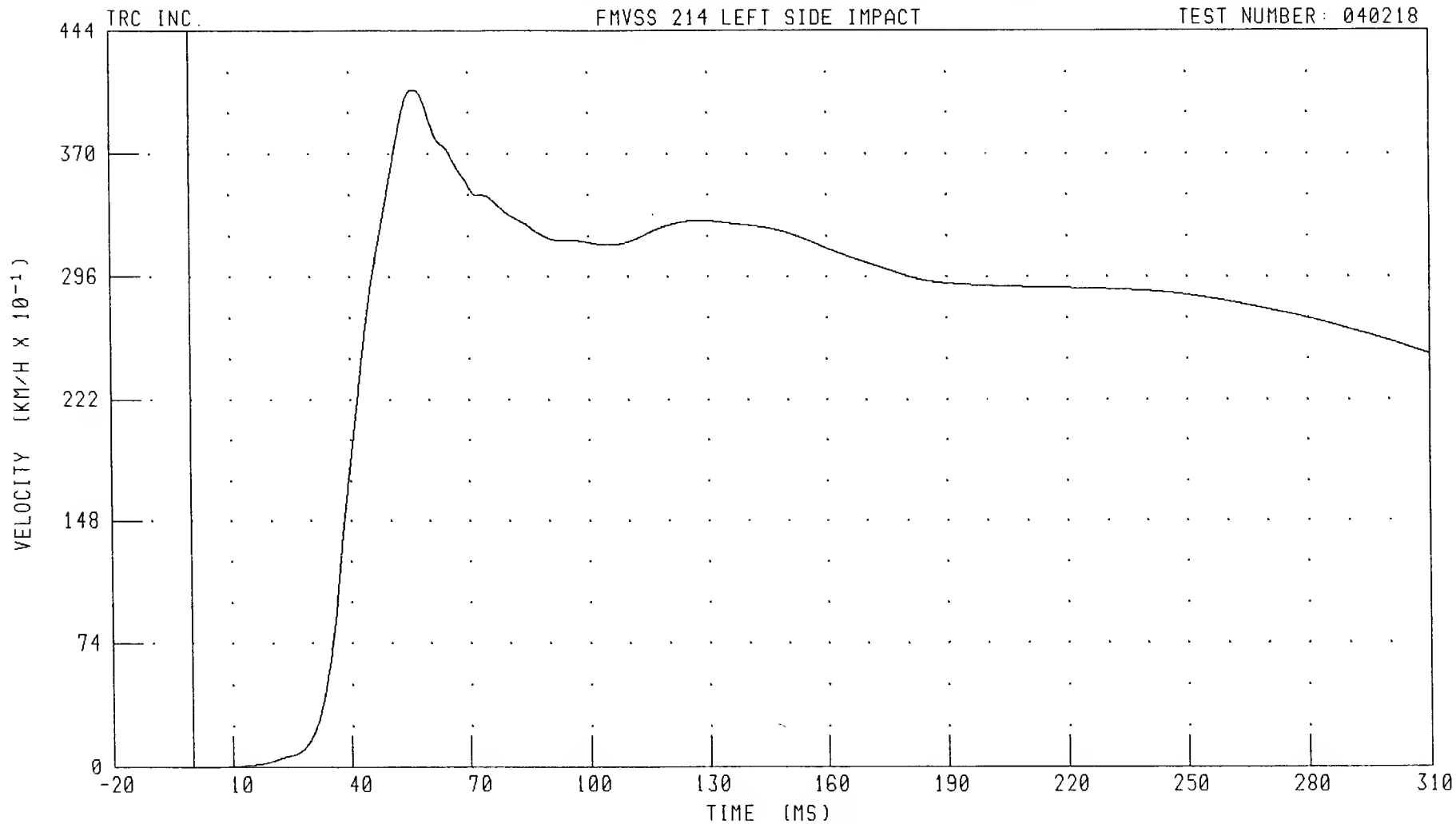
B-53

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YV4

FILTER: CH. CLASS 180

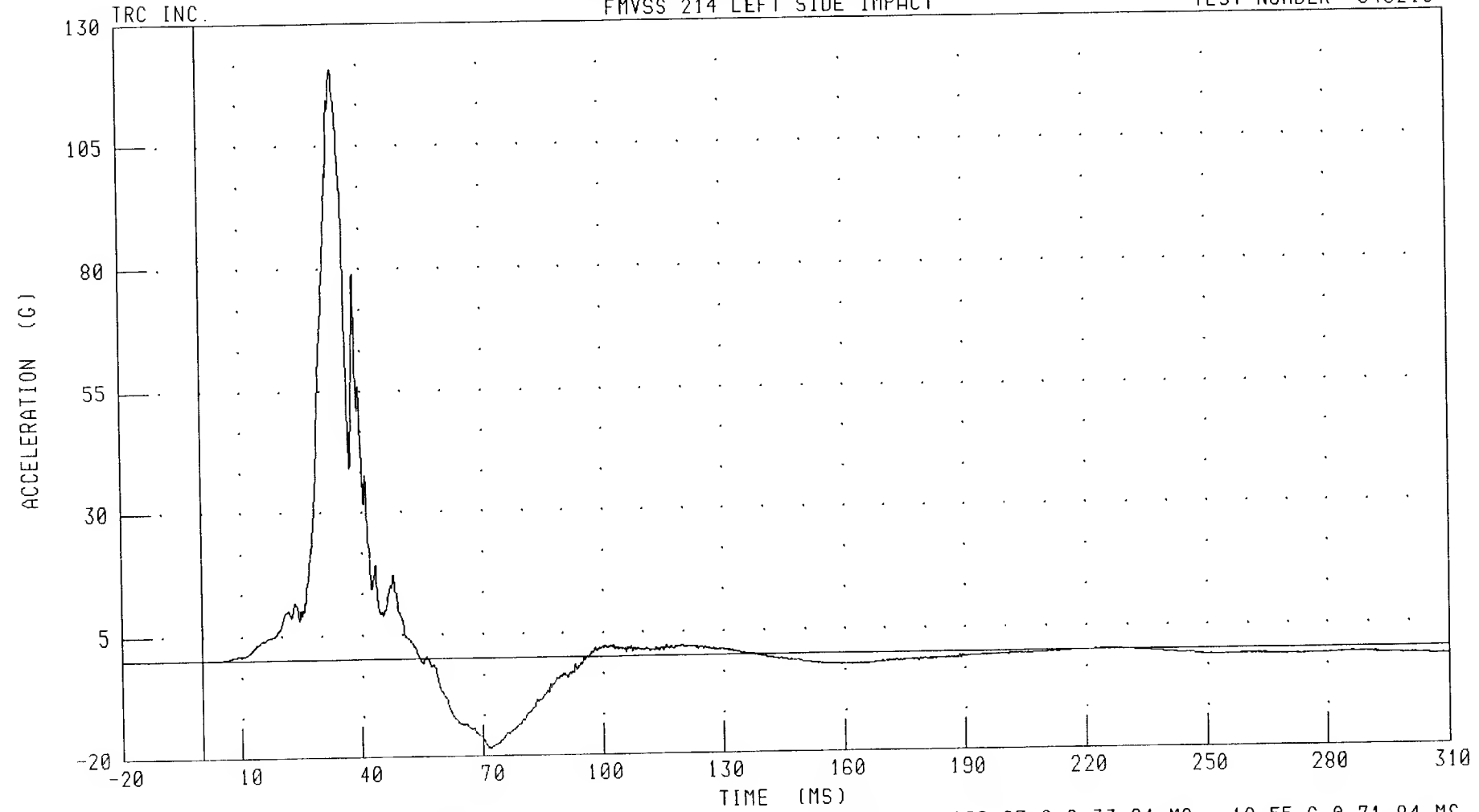
PEAK DATA: 40.86 KM/H @ 56.40 MS; 0.00 KM/H @ 0.00 MS

B-54

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYG4 FILTER: CH. CLASS 1000

PEAK DATA: 120.67 G @ 33.84 MS; -18.55 G @ 71.84 MS

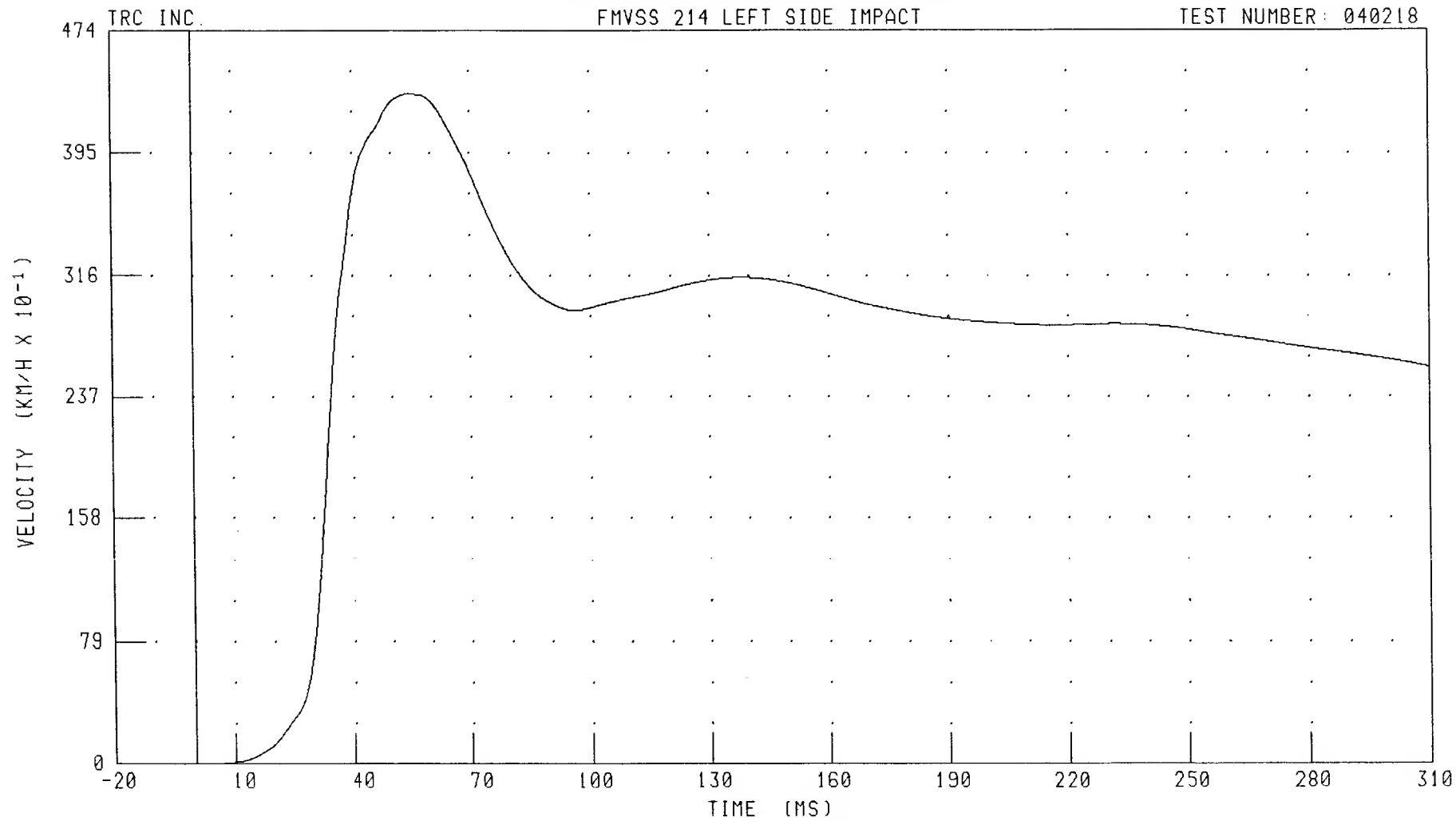
B-55

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYV4

FILTER: CH. CLASS 180

PEAK DATA: 43.25 KM/H @ 54.48 MS; 0.00 KM/H @ 0.00 MS

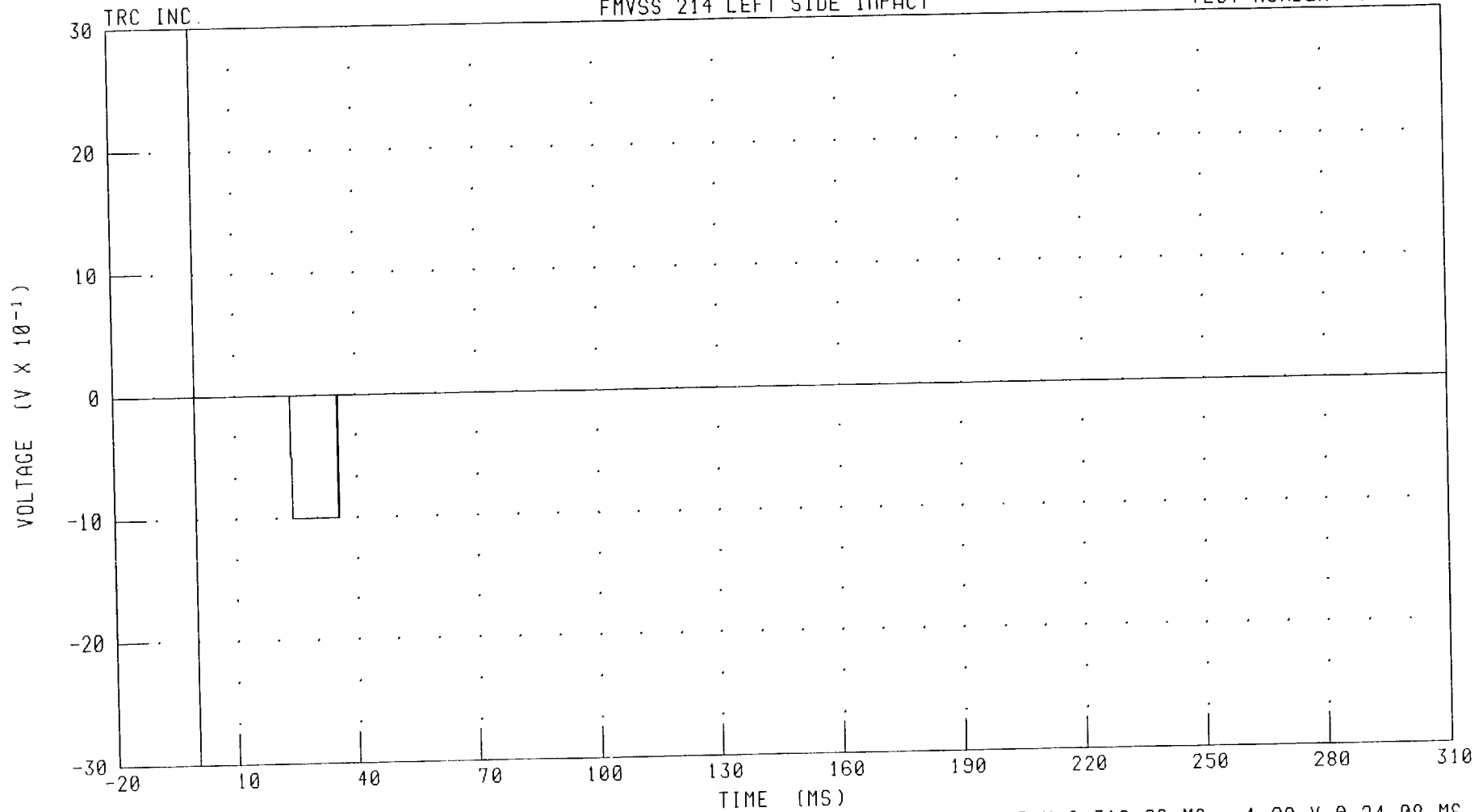
B-56

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER SHOULDER CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: SHLET4 FILTER: CH. CLASS 1000

B-57

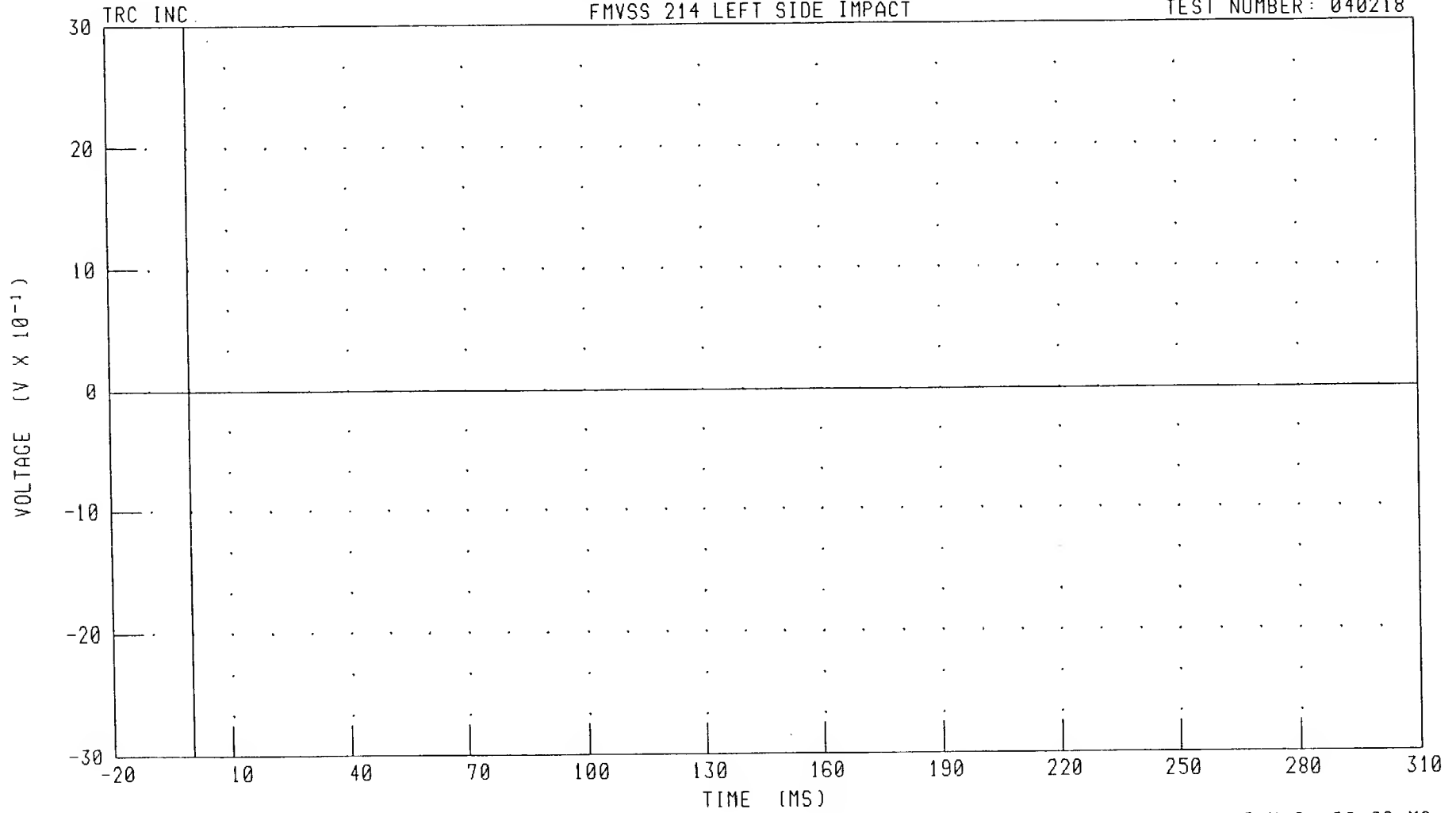
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

LEFT REAR PASSENGER PELVIS CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVET4

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

B-58

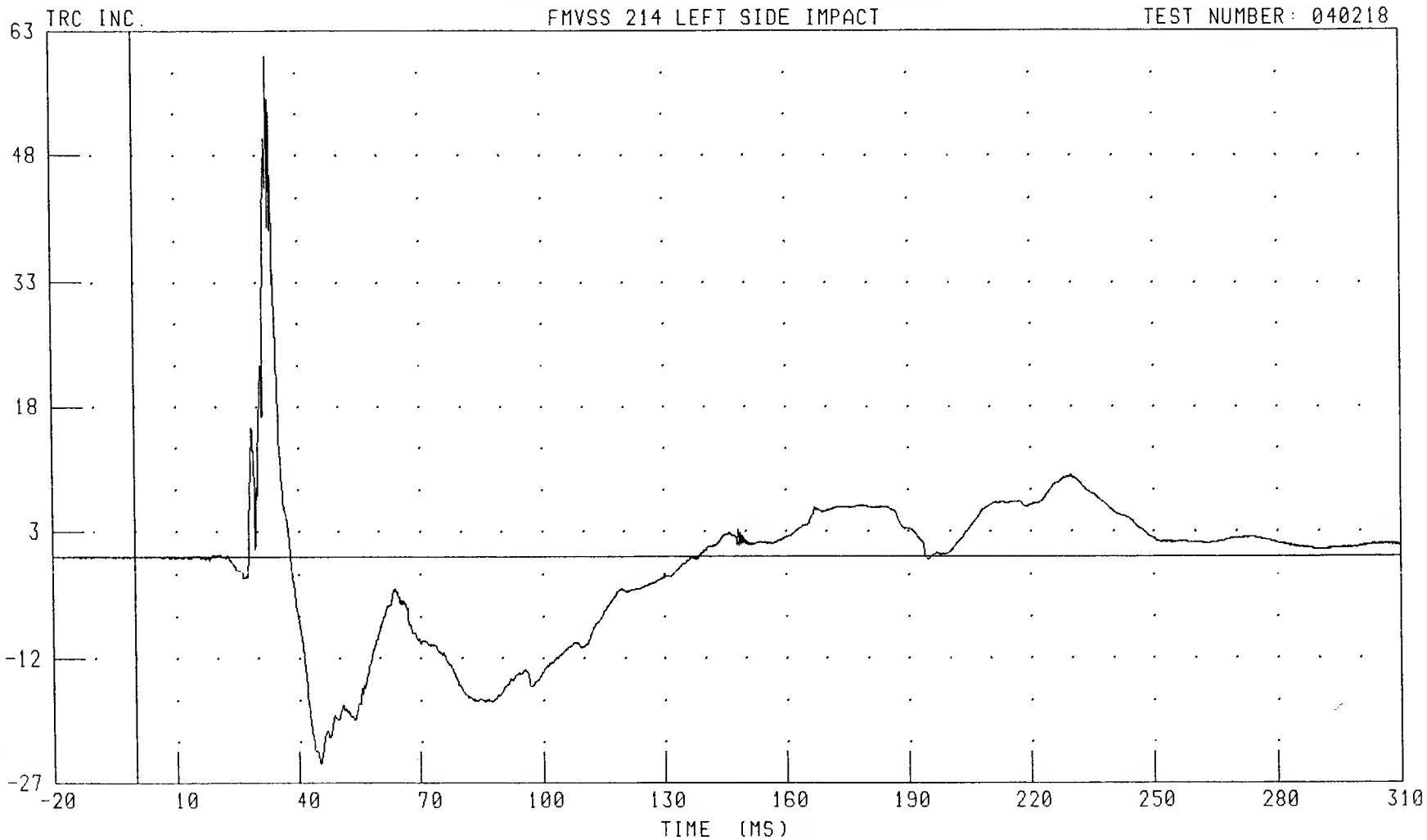
040218

Driver and Passenger Dummy Redundant Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD X-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXR1 FILTER: CH. CLASS 1000

PEAK DATA: 59.98 G @ 32.88 MS; -24.72 G @ 45.36 MS

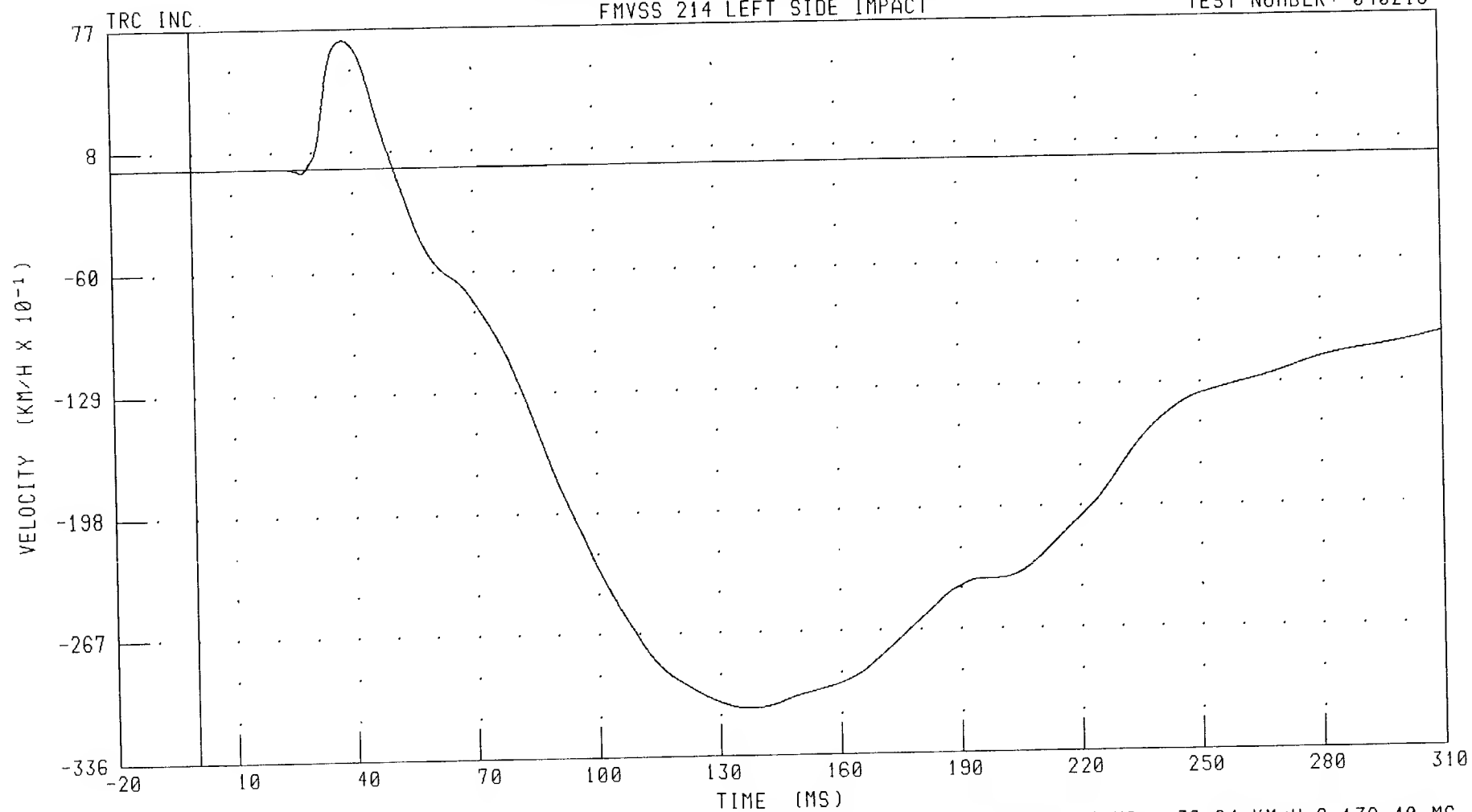
B-60

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD X-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXVI FILTER: CH. CLASS 180

PEAK DATA: 7.15 KM/H @ 38.24 MS; -30.94 KM/H @ 138.40 MS

B-61

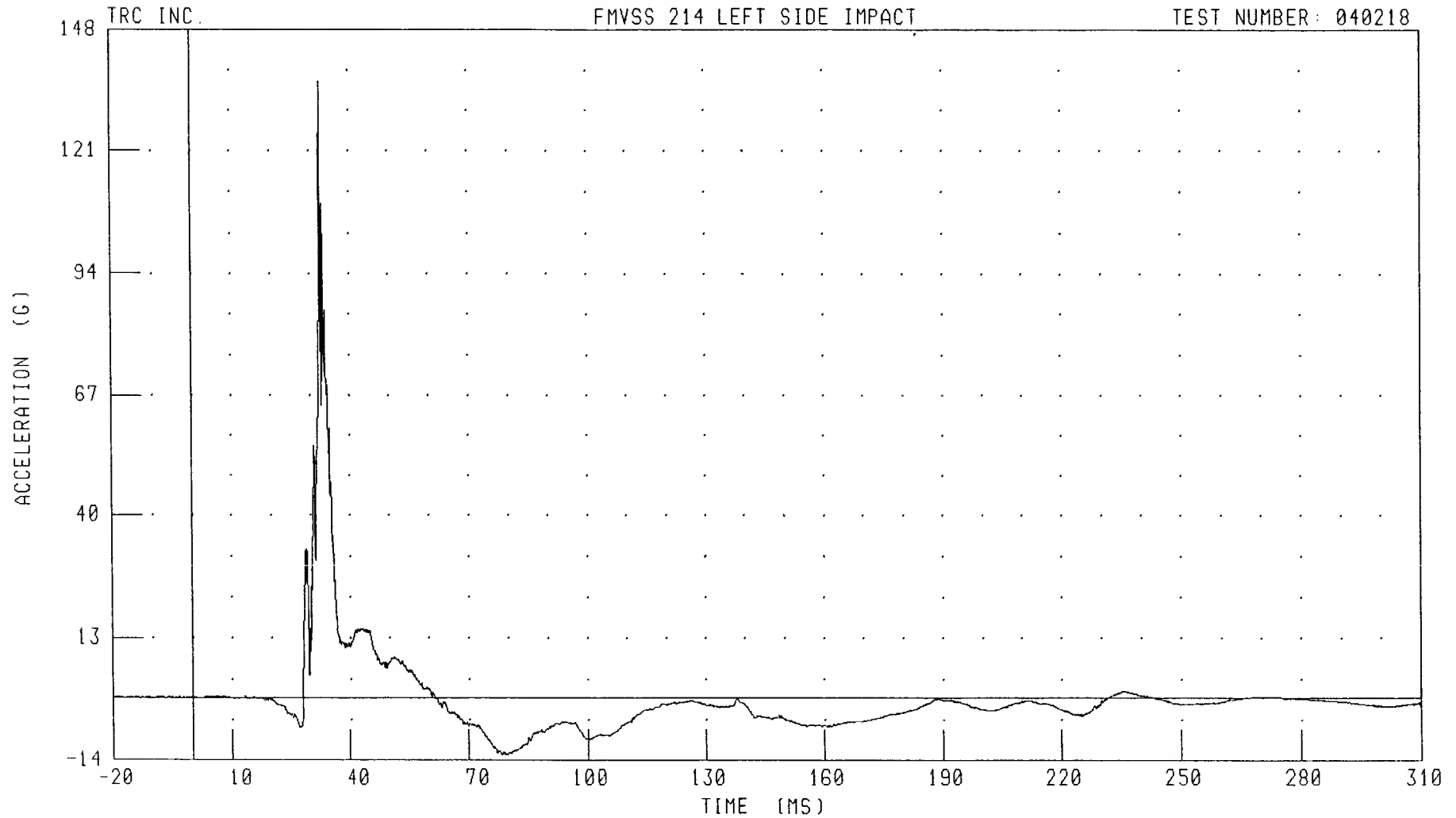
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYR1 FILTER: CH. CLASS 1000

PEAK DATA: 136.44 G @ 32.72 MS; -12.90 G @ 78.24 MS

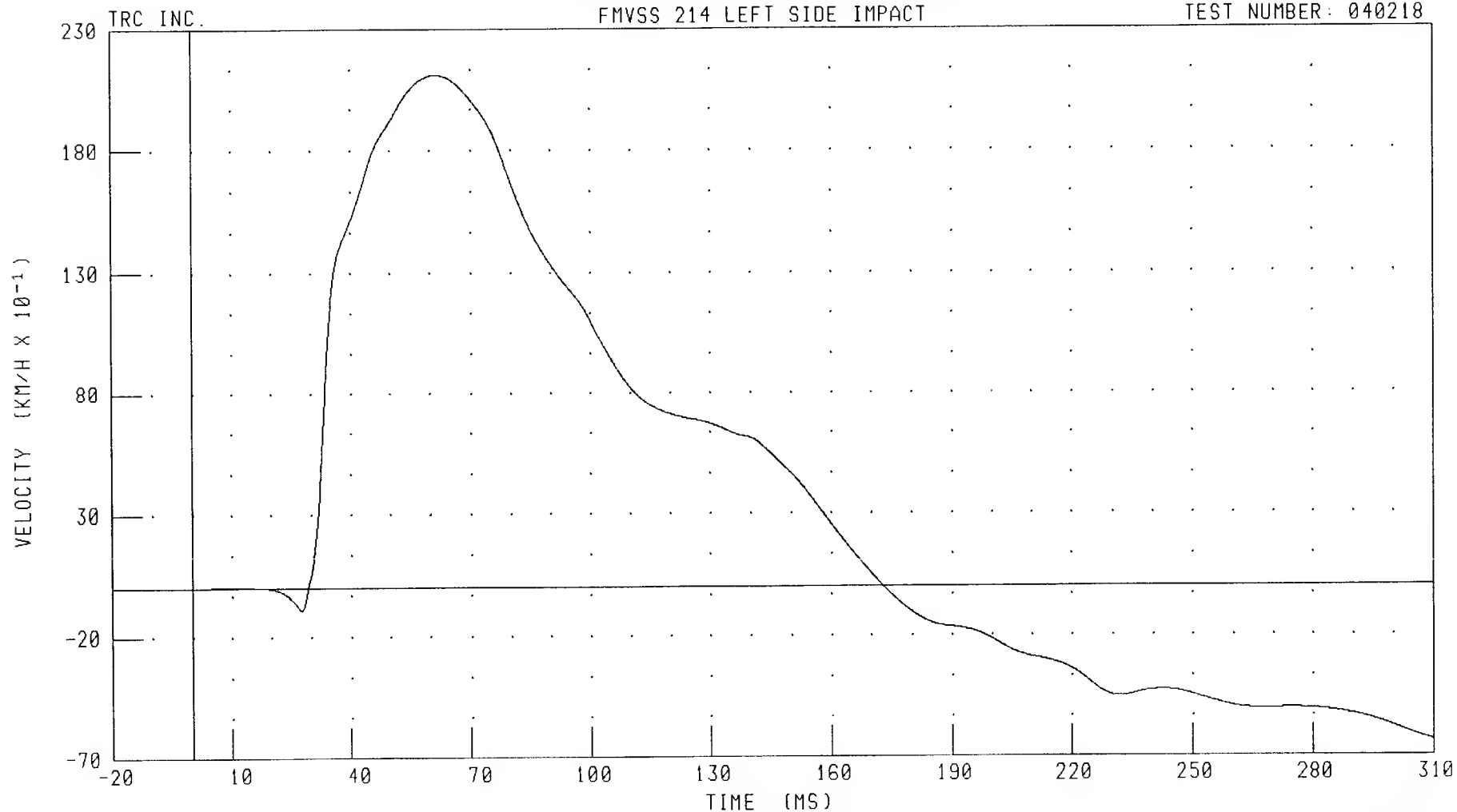
B-62

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYVI

FILTER: CH CLASS 180

PEAK DATA: 21.12 KM/H @ 61.60 MS; -6.37 KM/H @ 310.00 MS

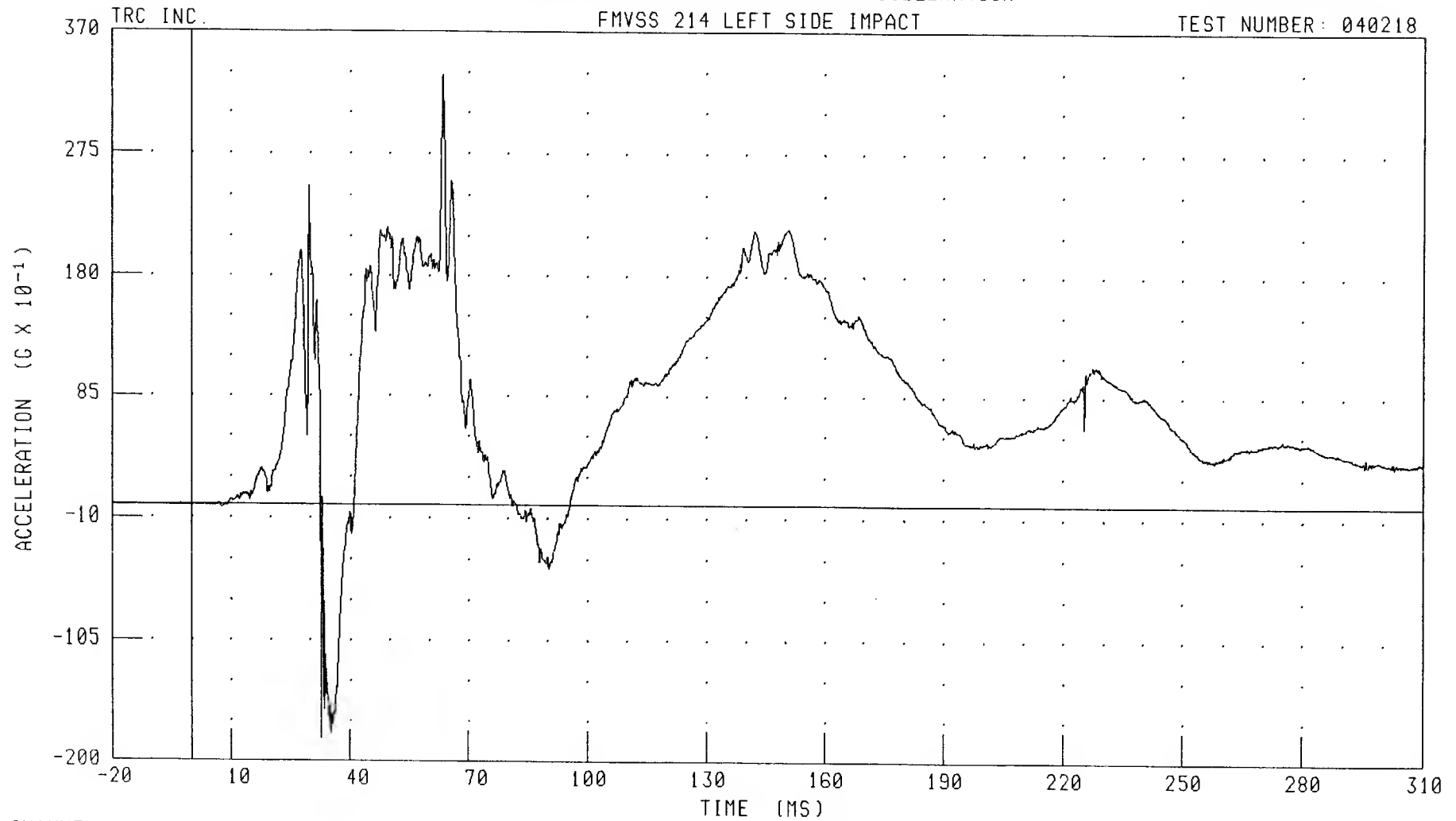
B-63

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD Z-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZR1 FILTER: CH. CLASS 1000

PEAK DATA: 33.66 G @ 63.44 MS, -18.23 G @ 32.80 MS

B-64

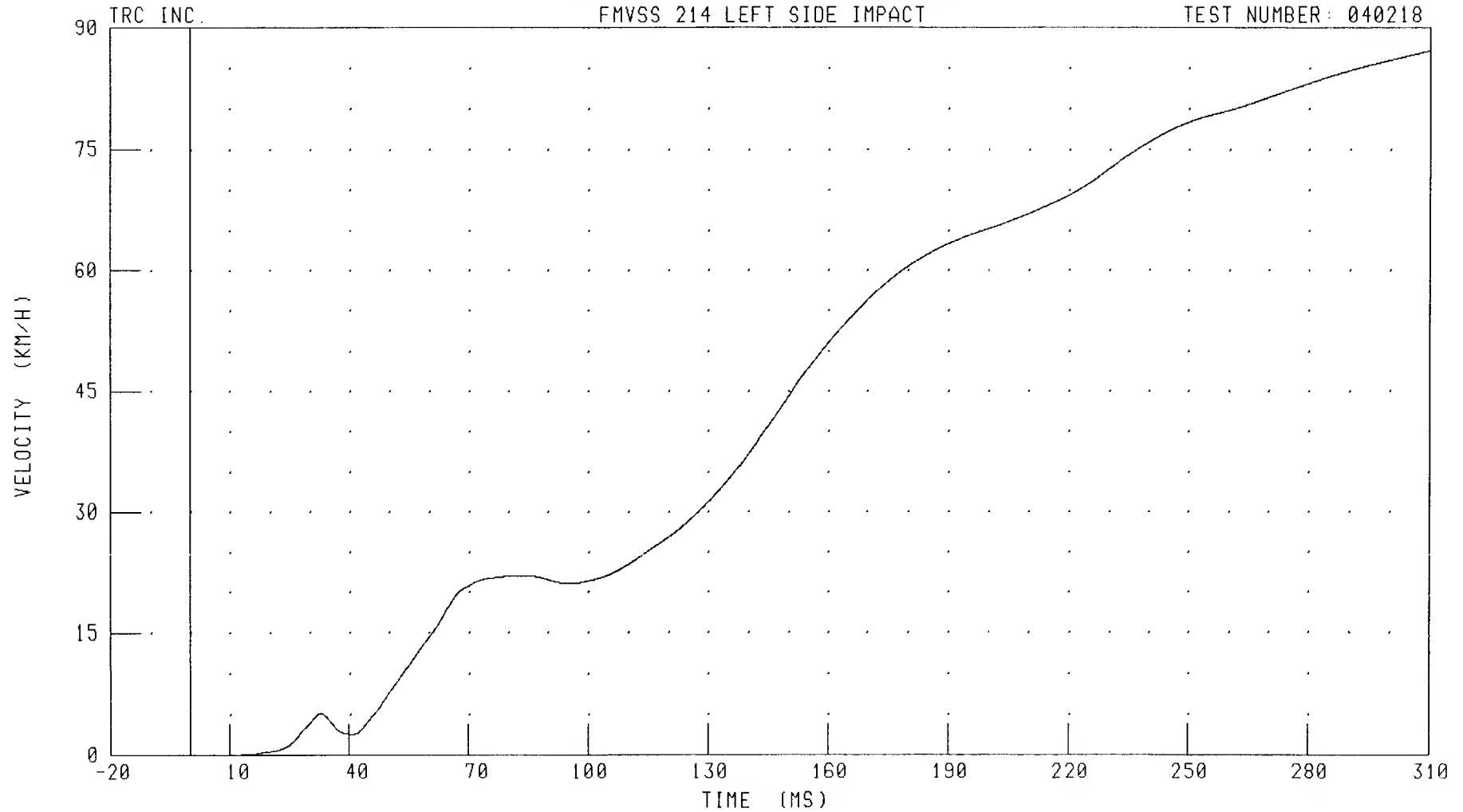
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER HEAD Z-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZVI FILTER: CH CLASS 180

PEAK DATA: 87.14 KM/H @ 310.00 MS; -0.01 KM/H @ 8.88 MS

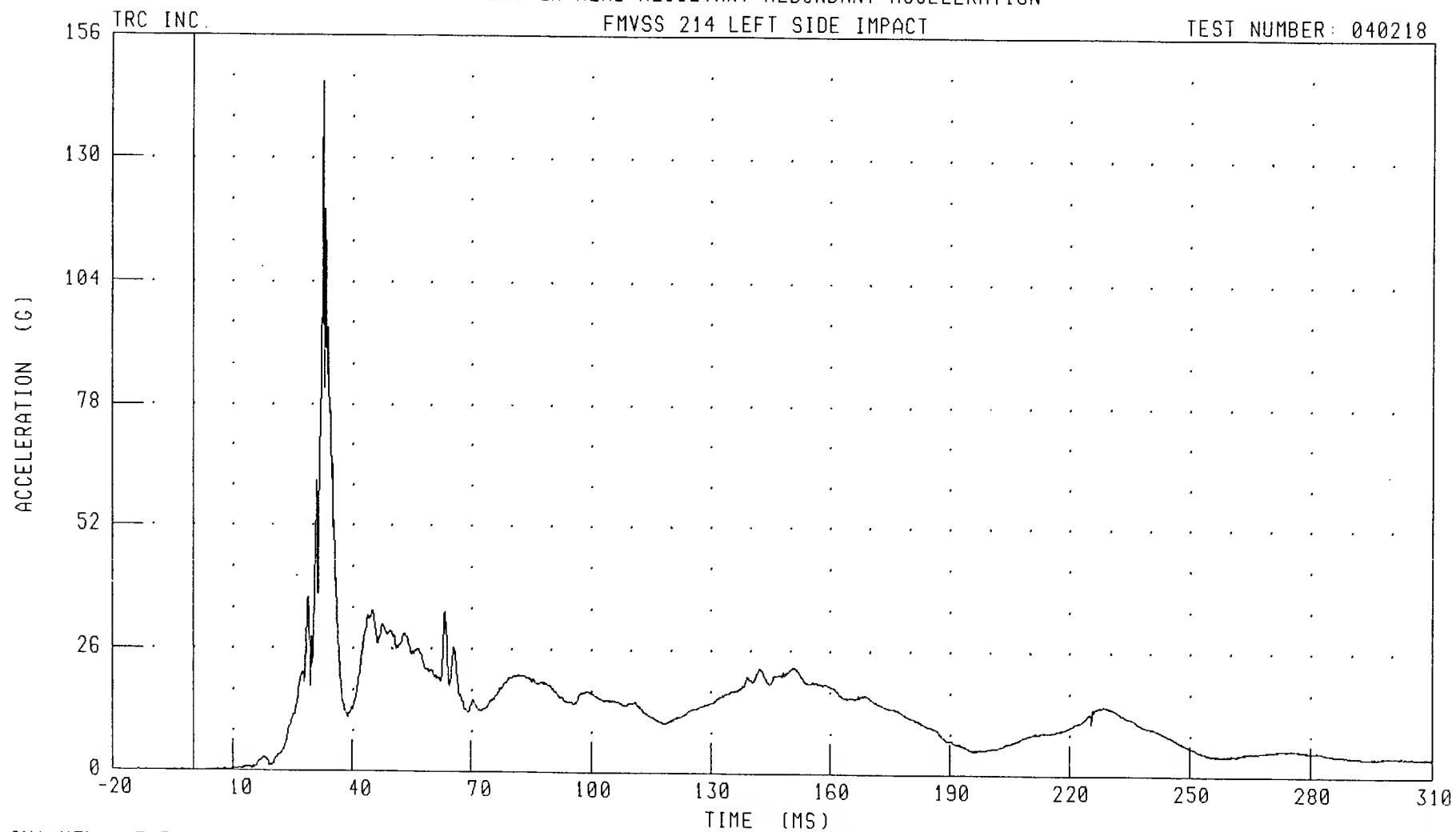
B-65

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER HEAD RESULTANT REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDRR1

FILTER: CH. CLASS 1000

PEAK DATA: 146.24 G @ 32.72 MS; 0.01 G @ -18.56 MS

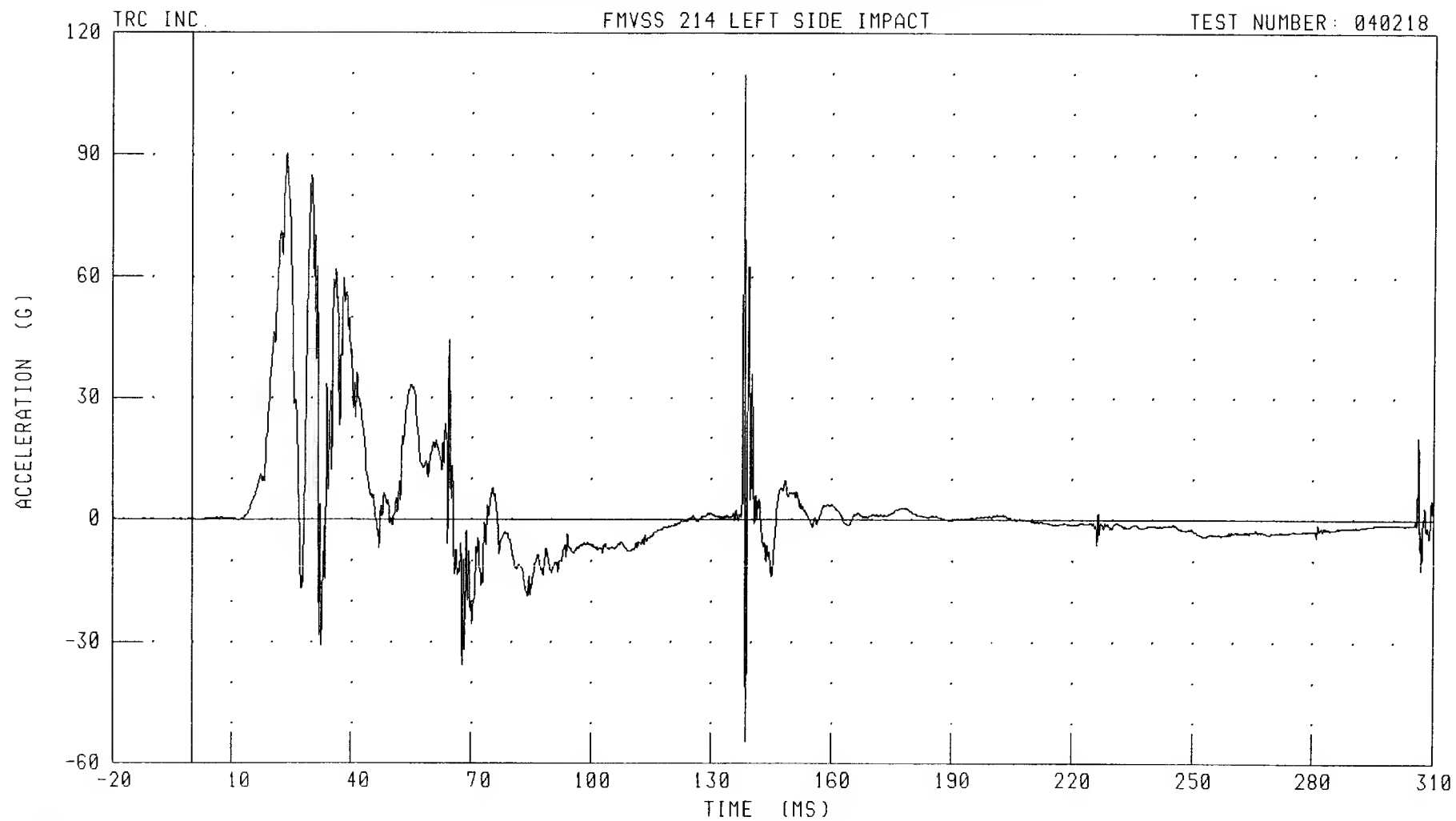
B-66

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYR1 FILTER: CH. CLASS 1000

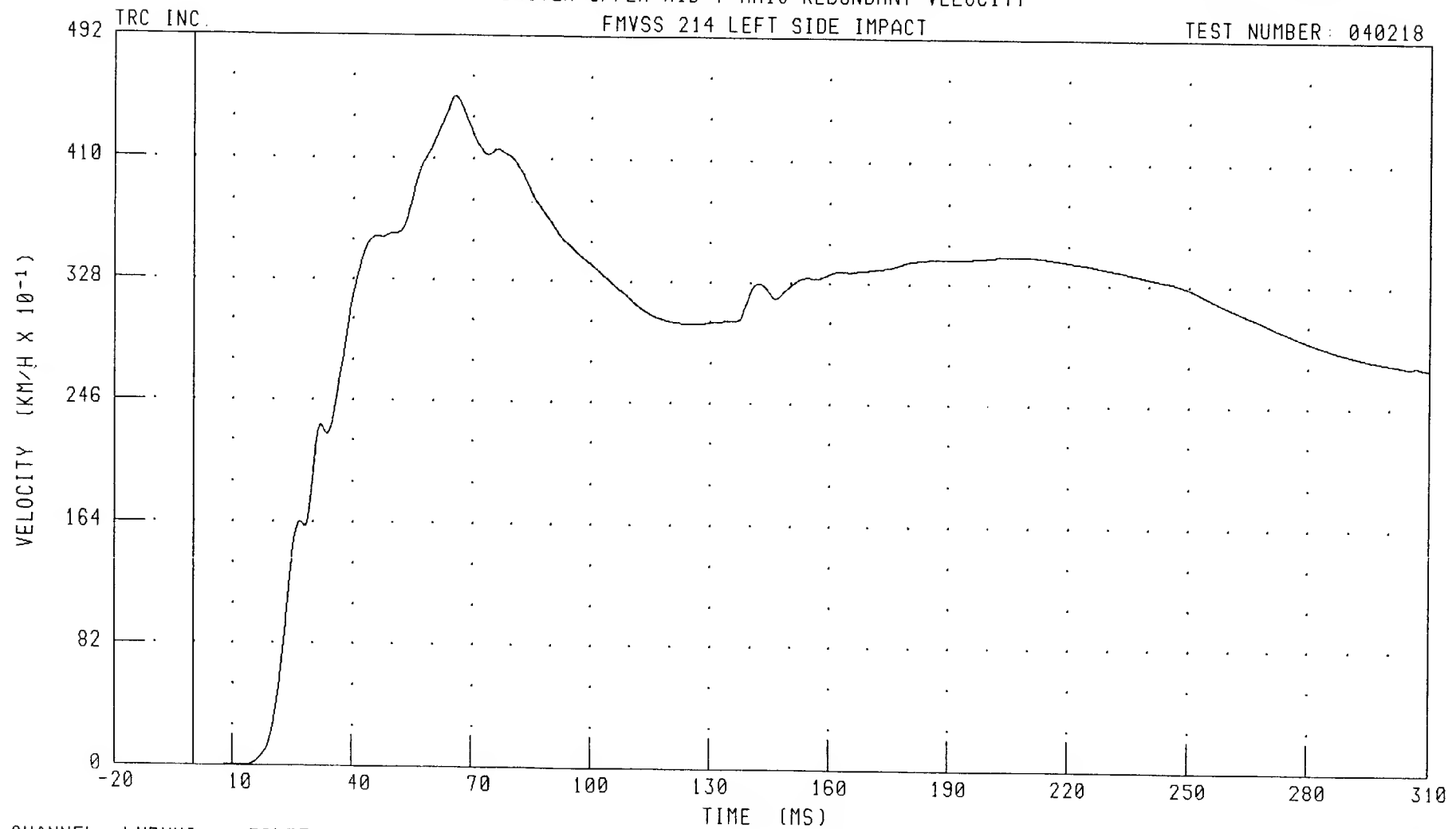
B-67

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER UPPER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYVI FILTER: CH. CLASS 180

PEAK DATA: 45.09 KM/H @ 65.60 MS; 0.00 KM/H @ 0.00 MS

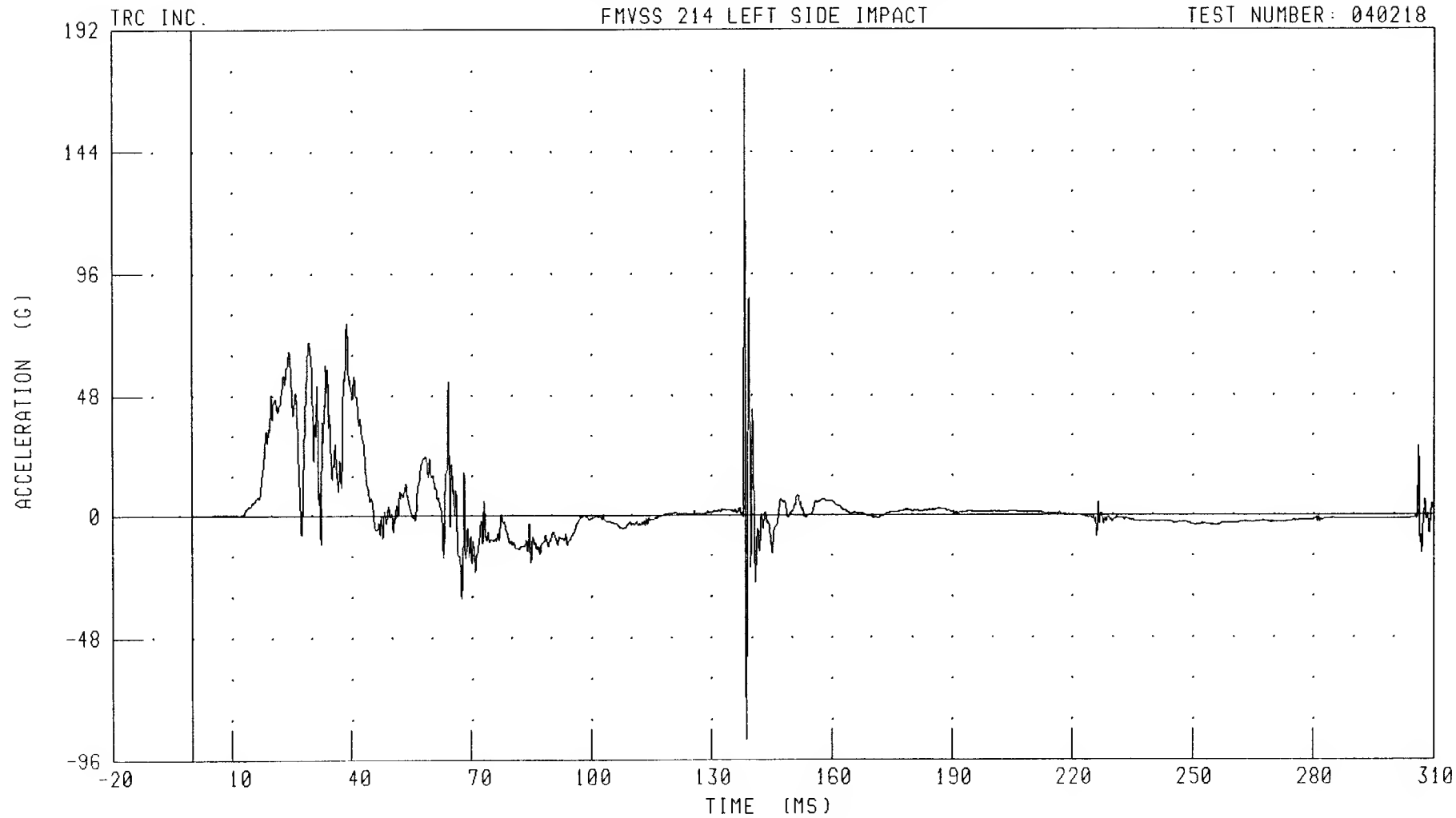
B-68

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



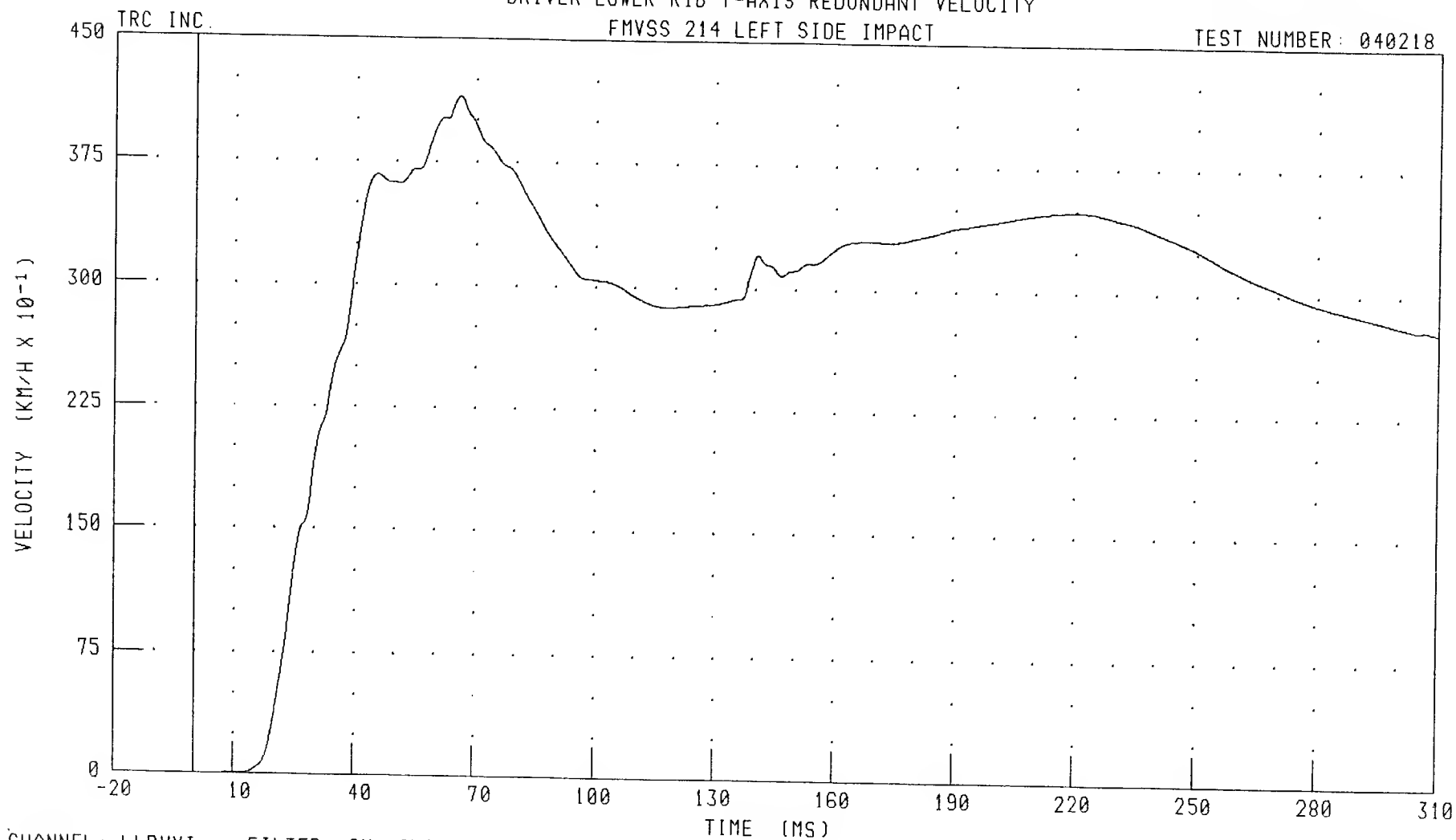
B-69

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



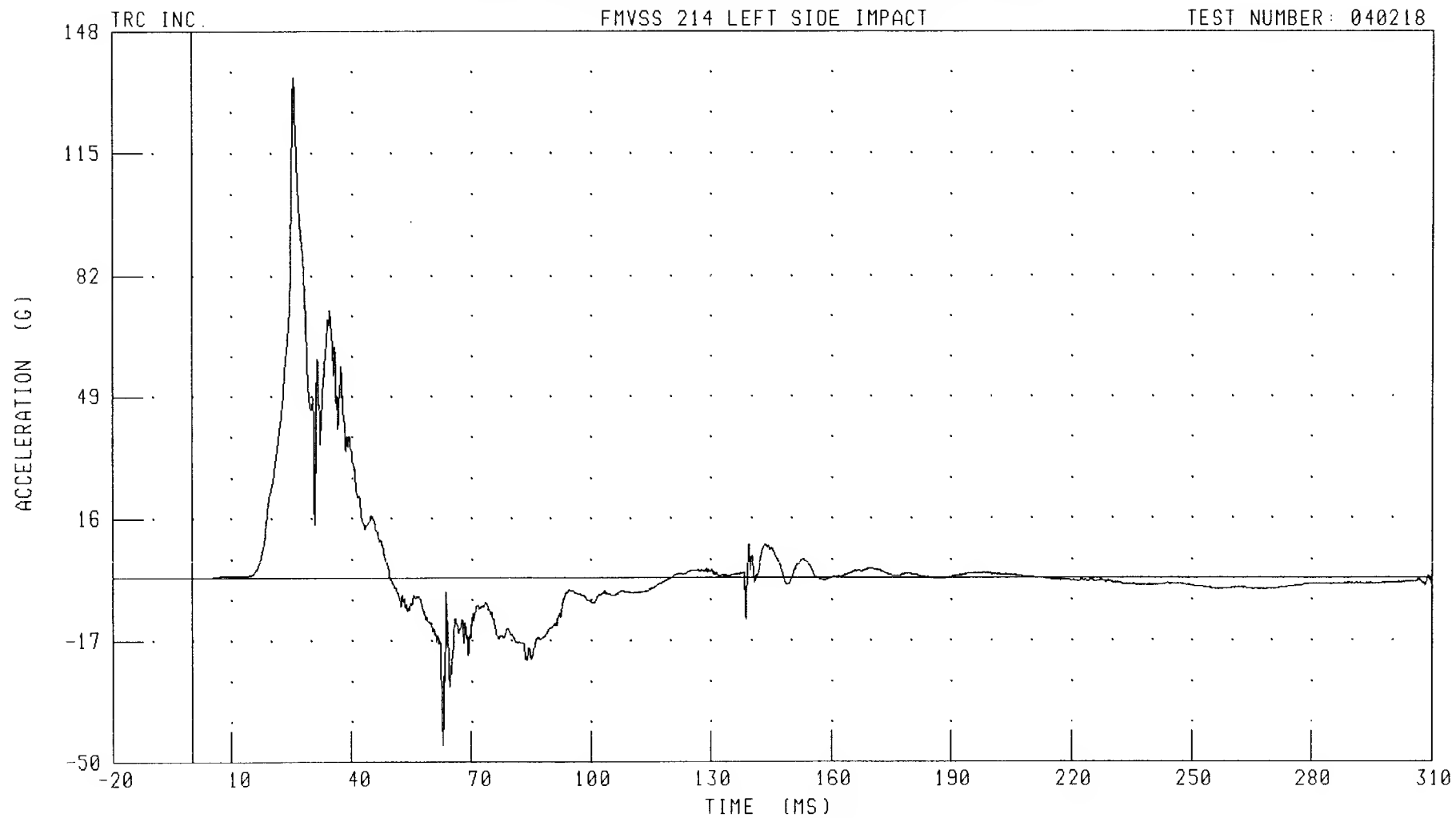
B-70

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YR1 FILTER: CH. CLASS 1000

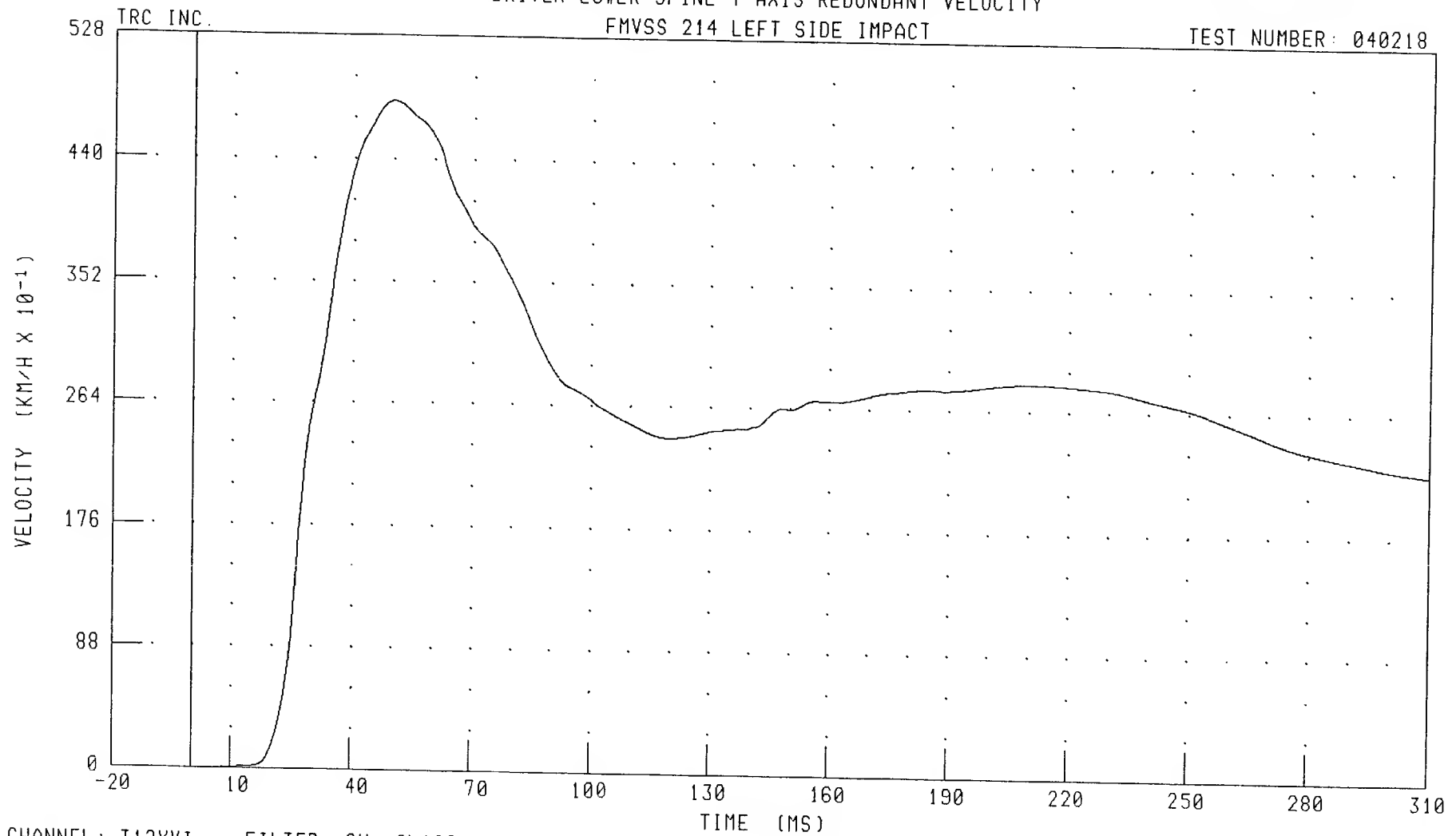
B-71

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



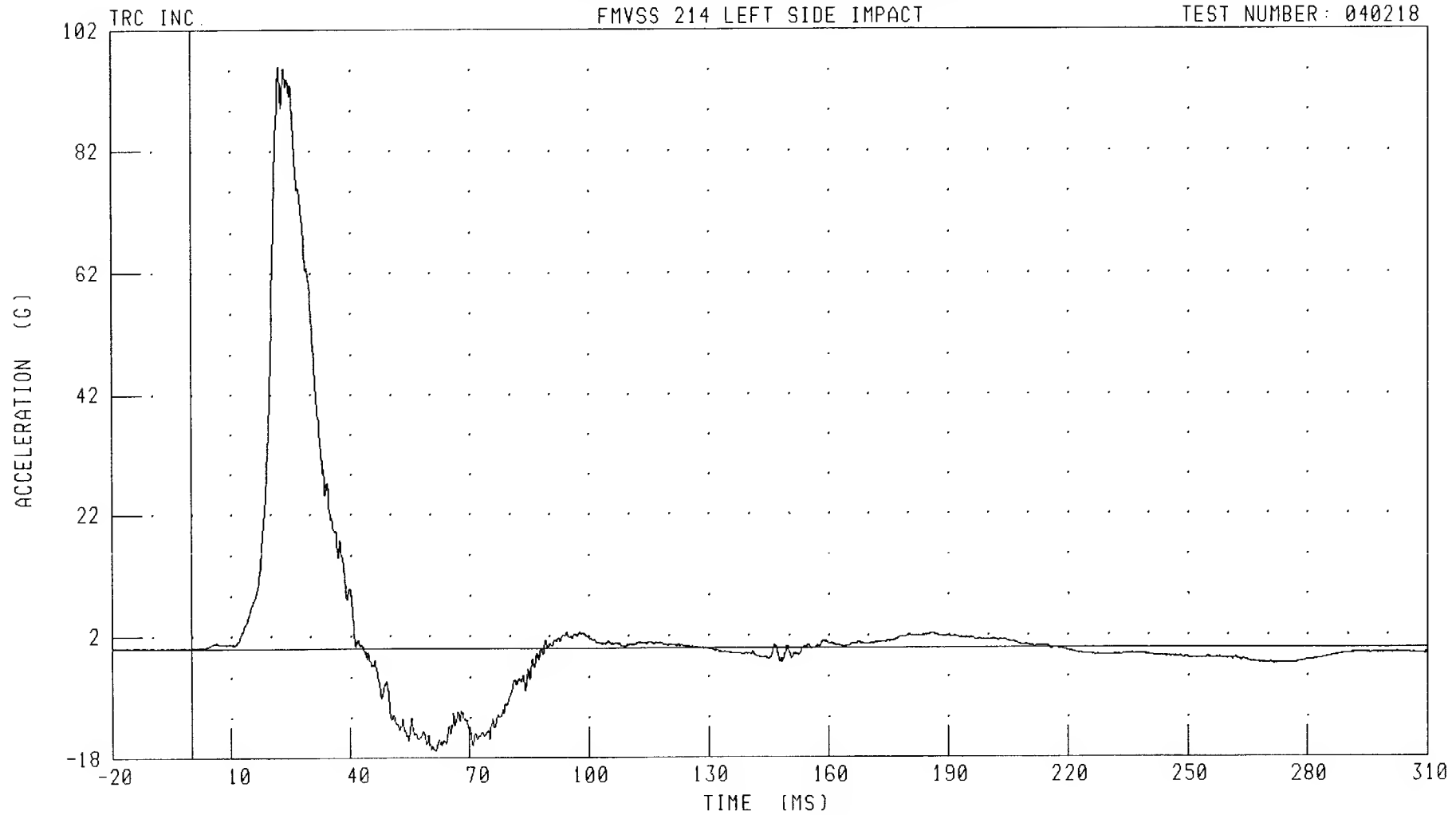
CHANNEL: T12YVI FILTER: CH. CLASS 180

PEAK DATA: 48.11 KM/H @ 49.92 MS; 0.00 KM/H @ 0.00 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYR1

FILTER: CH. CLASS 1000

PEAK DATA: 95.91 G @ 22.32 MS; -16.86 G @ 61.20 MS

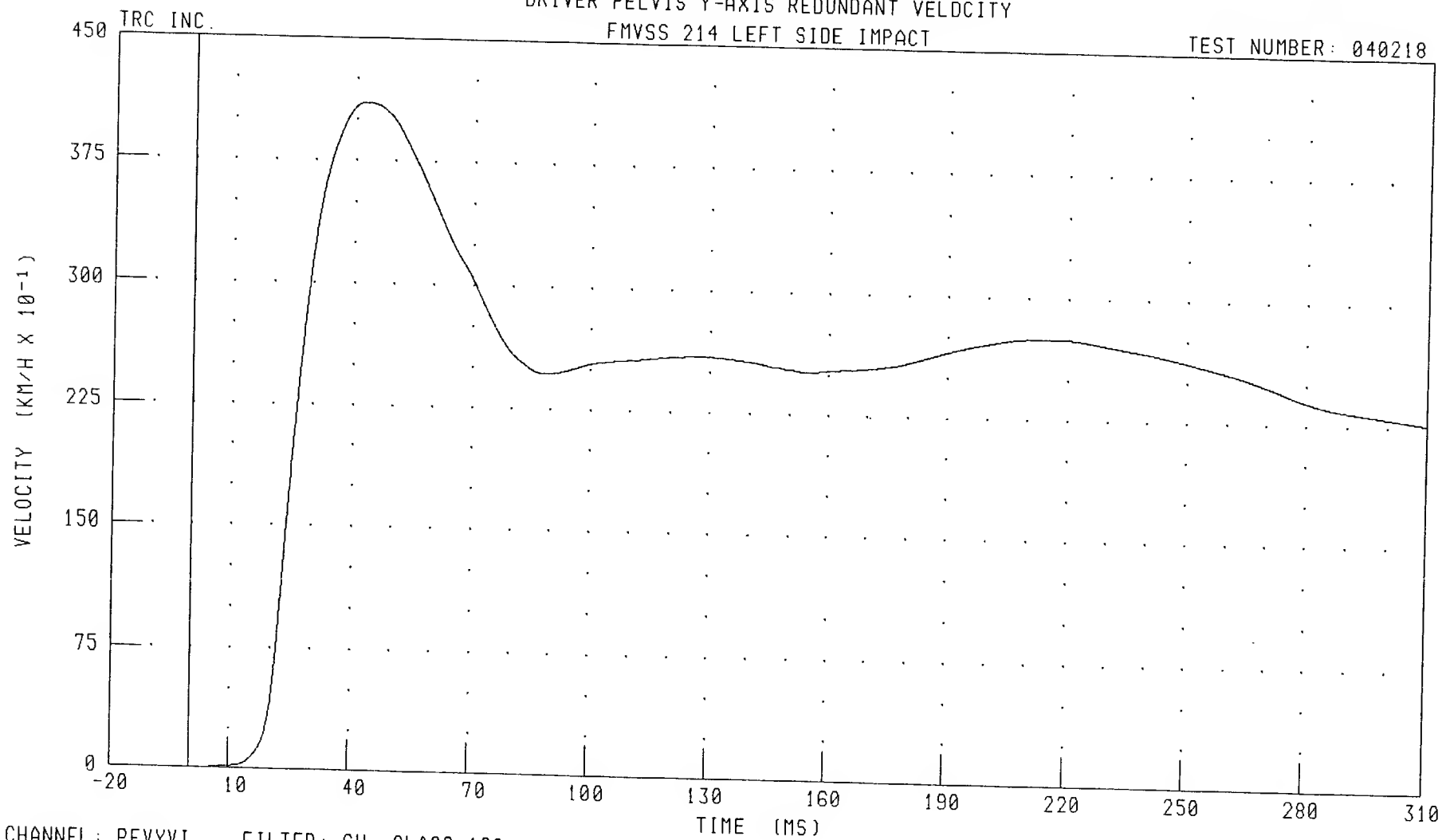
B-73

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER PELVIS Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYVI

FILTER: CH. CLASS 180

PEAK DATA: 41.02 KM/H @ 43.12 MS; 0.00 KM/H @ 0.00 MS

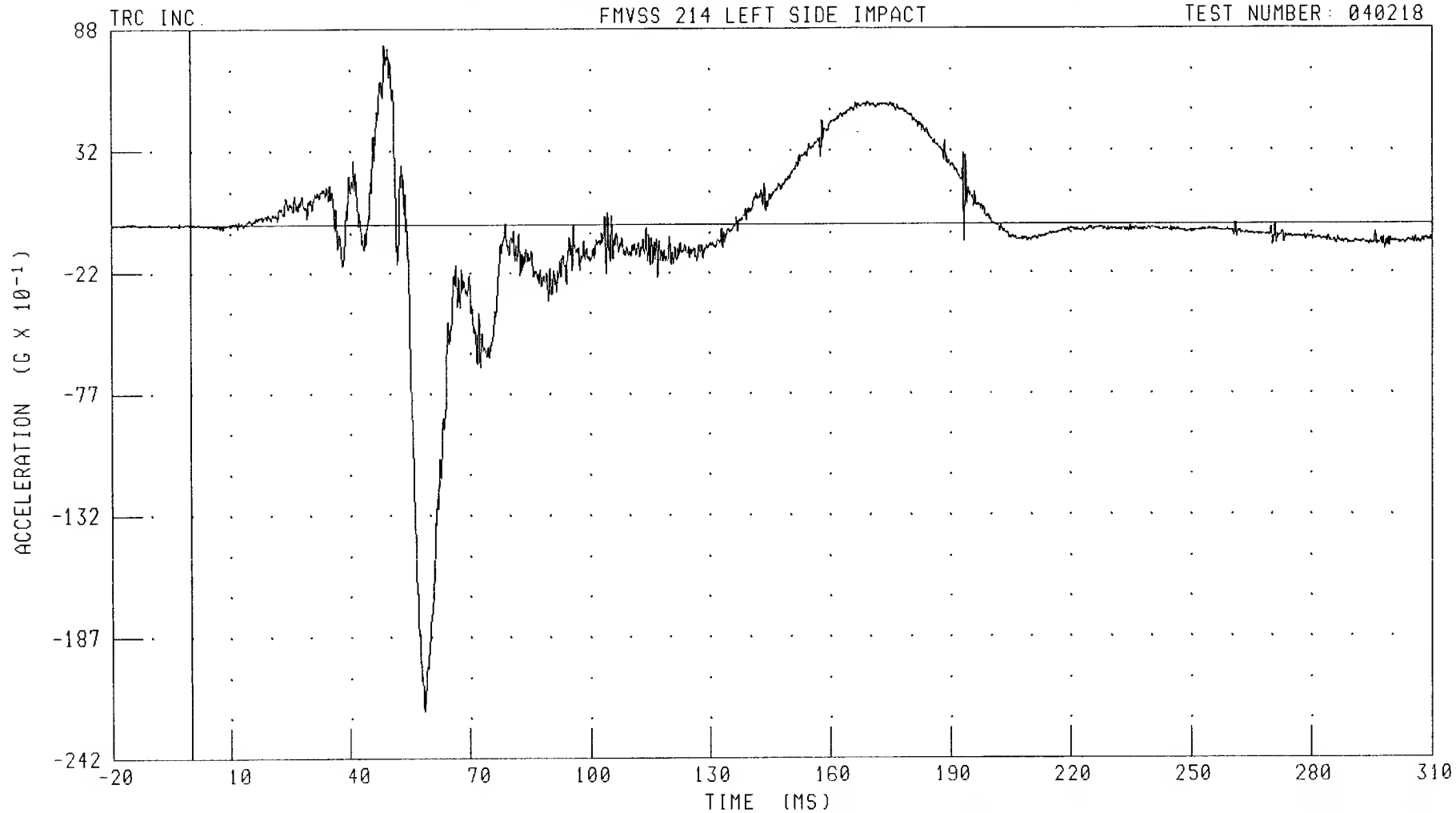
B-74

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDXR4 FILTER: CH. CLASS 1000

PEAK DATA: 8.08 G @ 48.64 MS; -22.12 G @ 58.40 MS

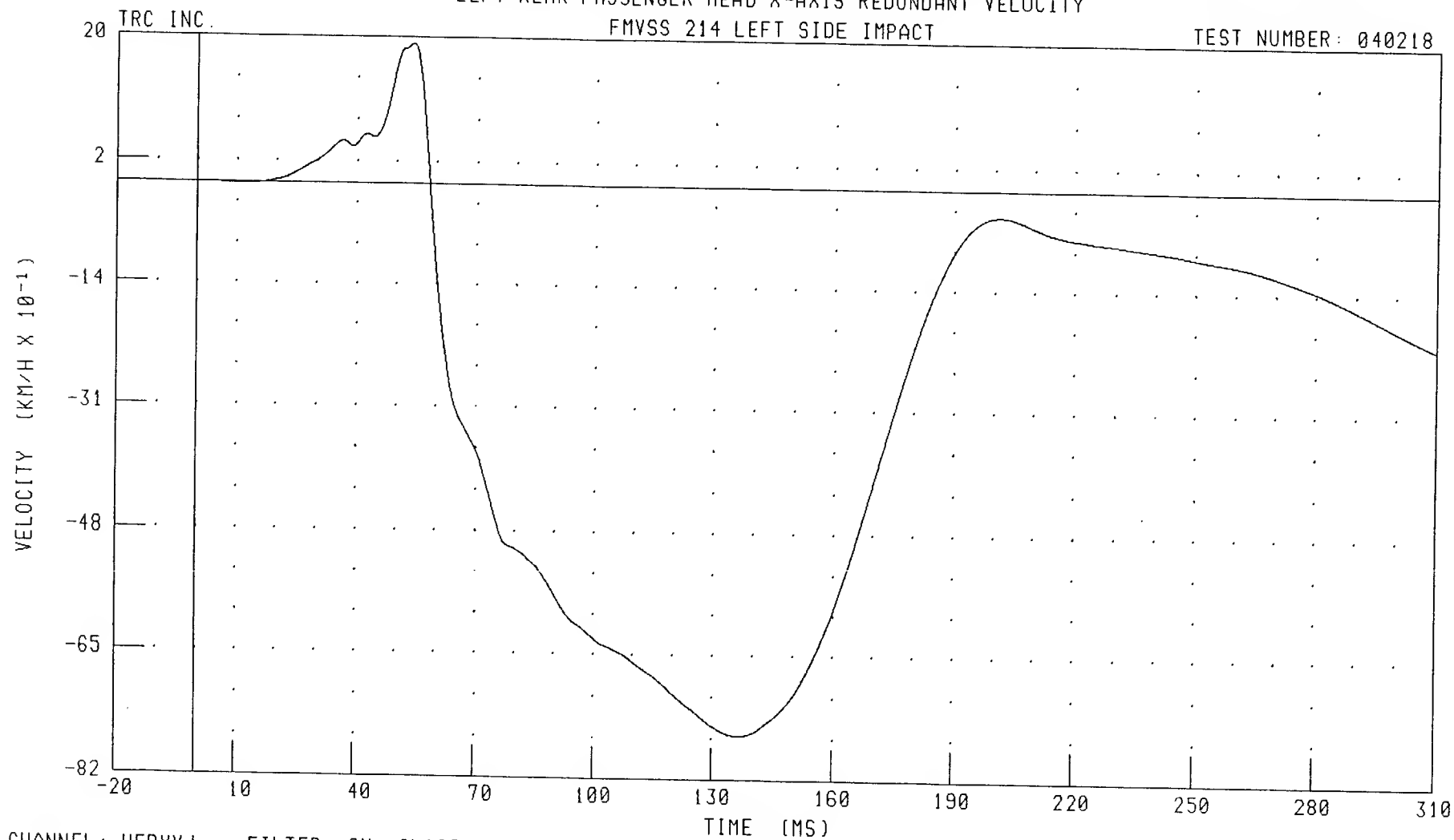
B-75

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



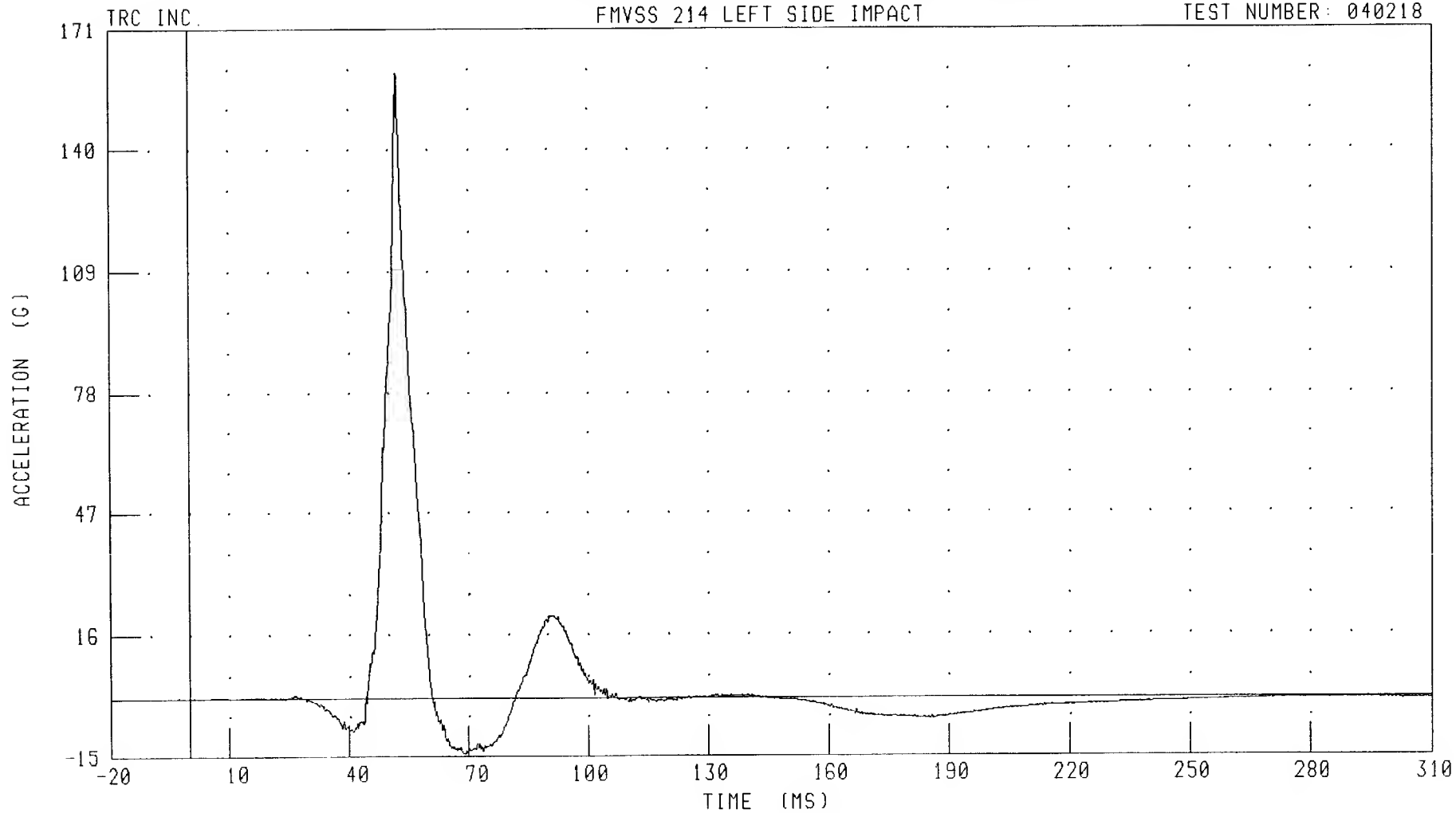
B-76

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYR4

FILTER: CH, CLASS 1000

PEAK DATA: 159.70 G @ 52.16 MS; -14.50 G @ 69.12 MS

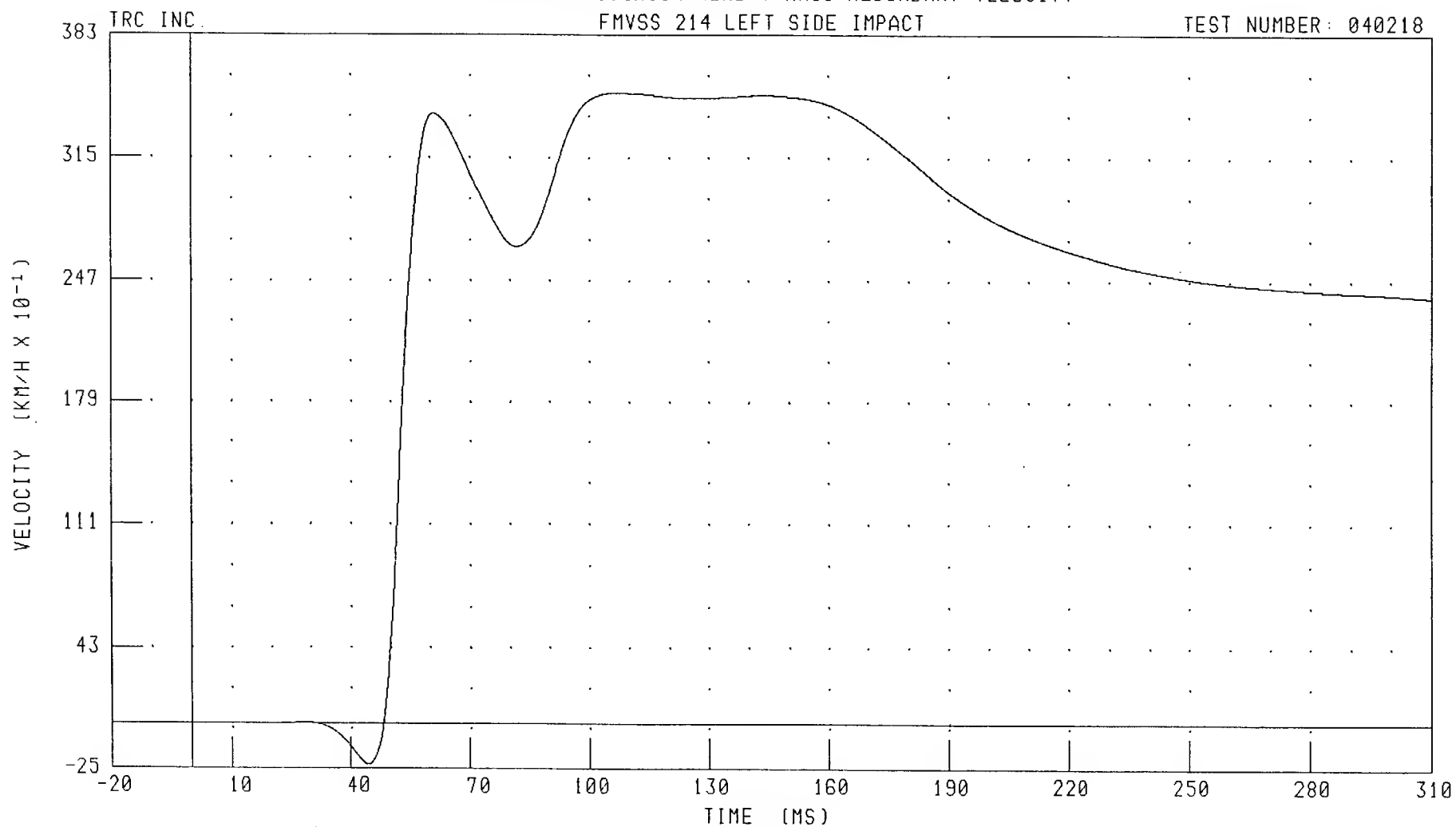
B-77

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDYVJ FILTER: CH. CLASS 180

PEAK DATA: 35.10 KM/H @ 107.36 MS; -2.29 KM/H @ 44.40 MS

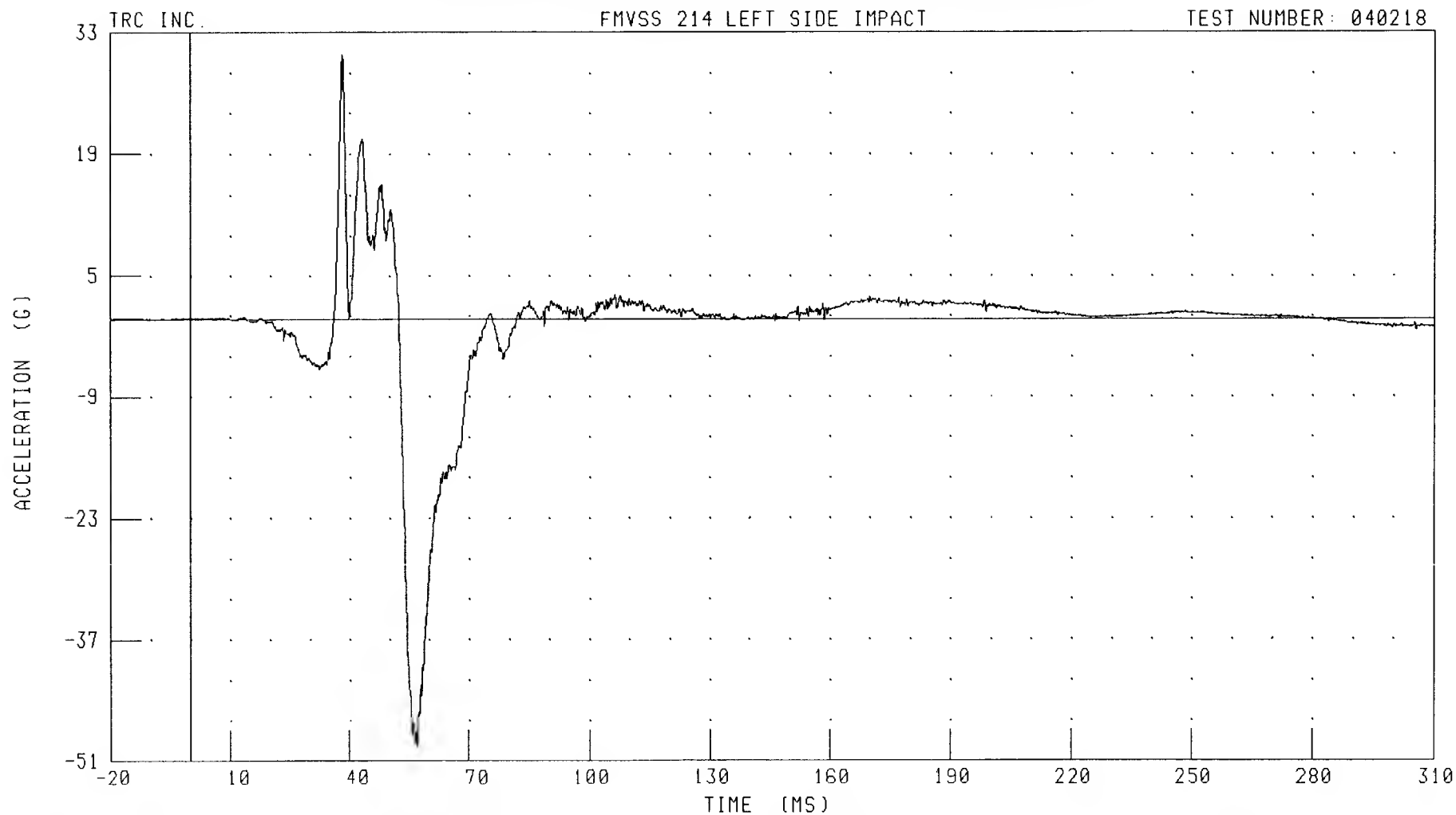
B-78

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZR4 FILTER: CH. CLASS 1000

PEAK DATA: 30.39 G @ 38.16 MS; -49.49 G @ 57.04 MS

B-79

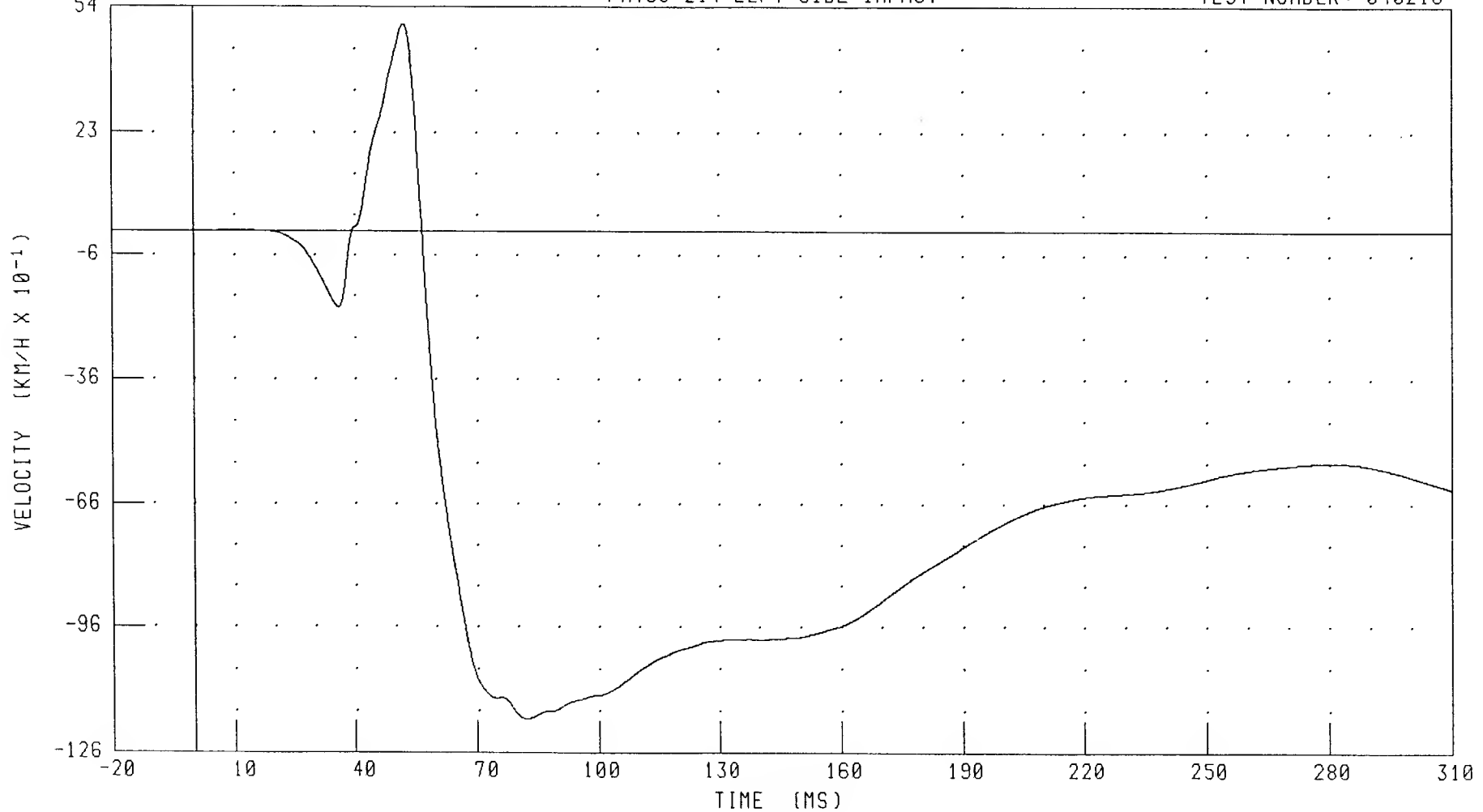
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT VELOCITY

TRC INC.

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDZVJ FILTER: CH. CLASS 180

PEAK DATA: 4.99 KM/H @ 52.24 MS; -11.79 KM/H @ 82.00 MS

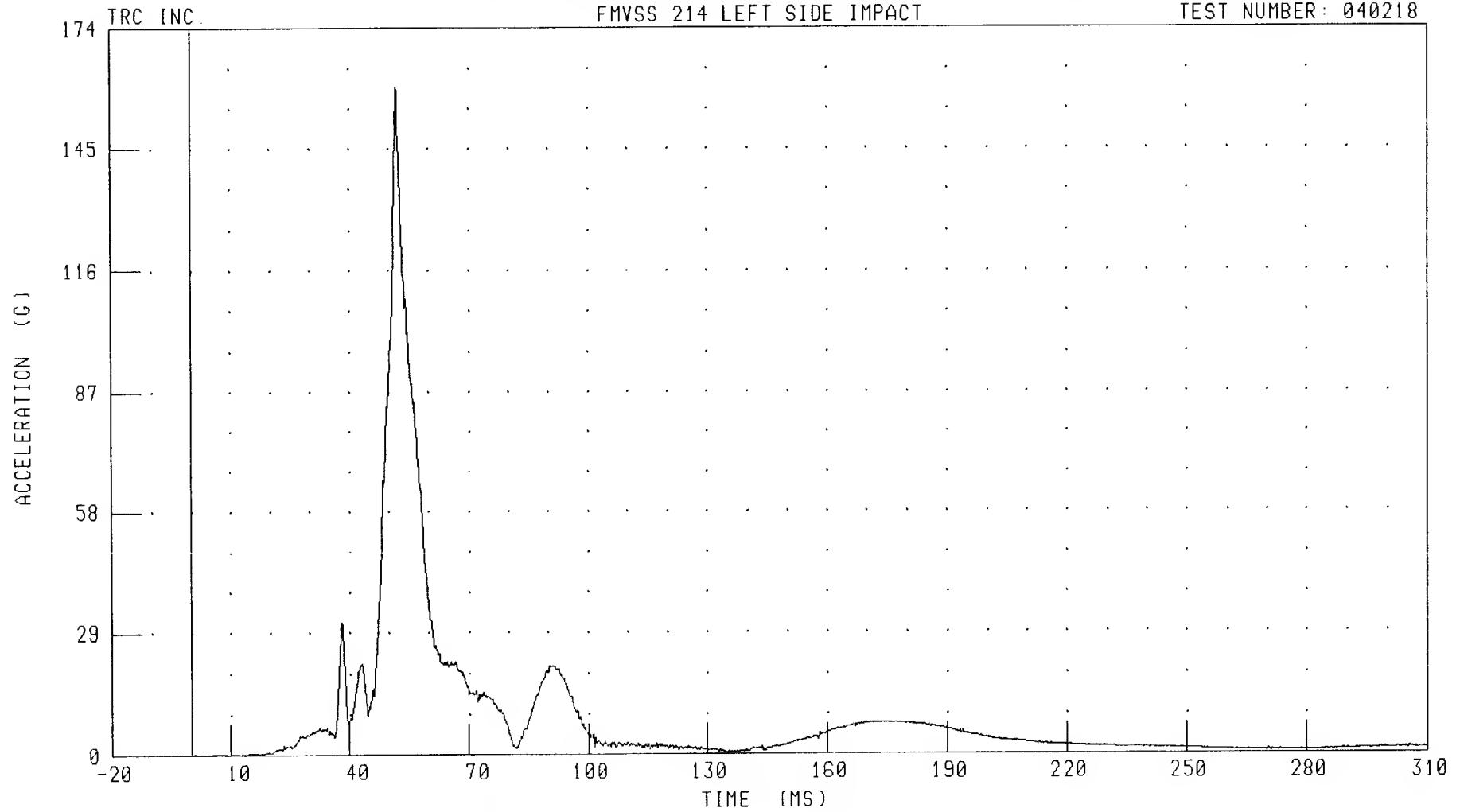
B-80

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER HEAD RESULTANT REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: HEDRR4 FILTER: CH. CLASS 1000

PEAK DATA: 159.72 G @ 52.16 MS; 0.01 G @ -12.08 MS

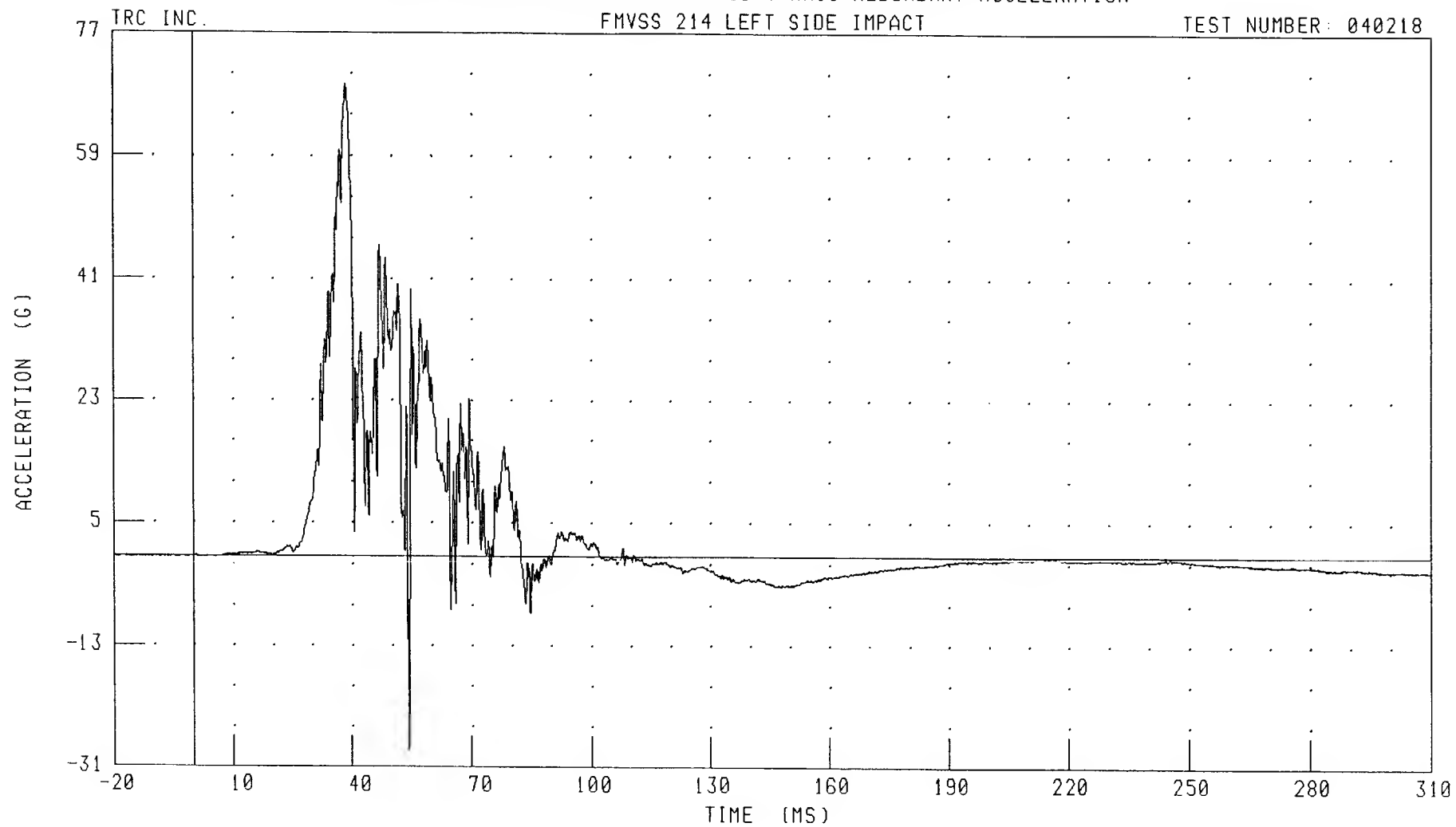
B-81

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYR4 FILTER: CH. CLASS 1000

PEAK DATA: 69.49 G @ 38.64 MS, -28.71 G @ 54.24 MS

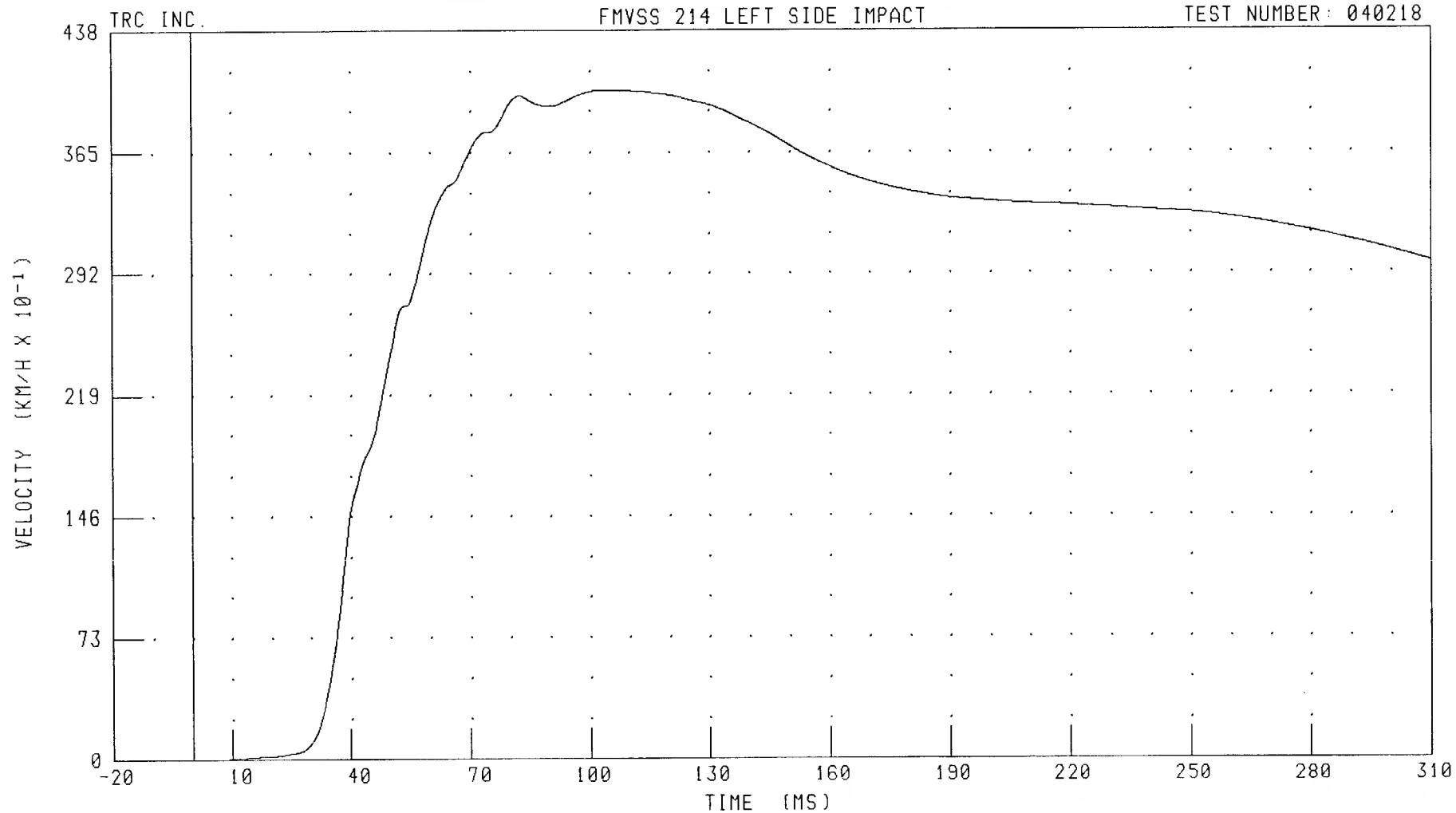
B-82

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYVJ

FILTER: CH. CLASS 180

PEAK DATA: 40.19 KM/H @ 102.64 MS; 0.00 KM/H @ 0.00 MS

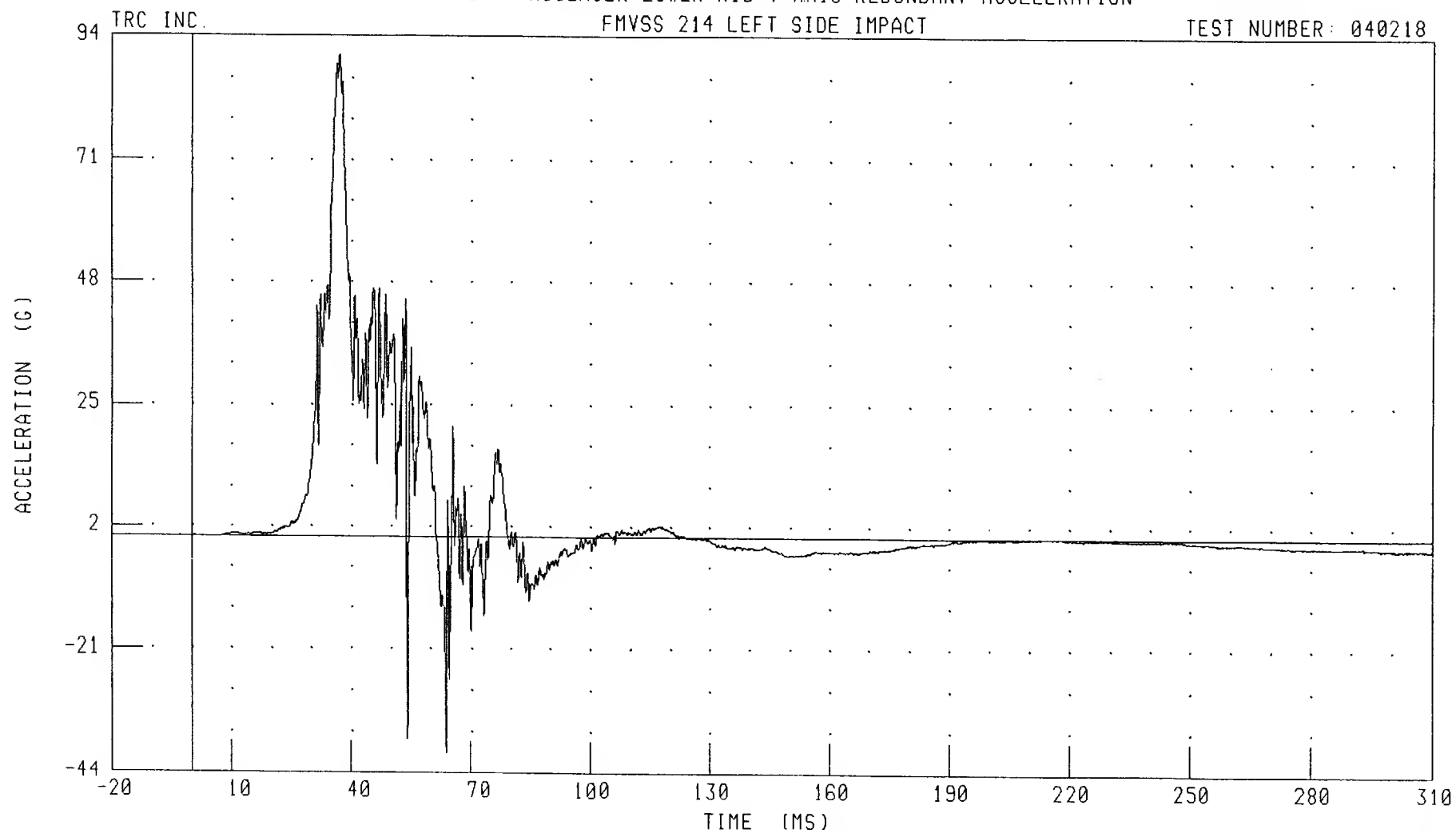
B-83

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYR4

FILTER: CH. CLASS 1000

PEAK DATA: 90.52 G @ 37.04 MS; -40.37 G @ 63.92 MS

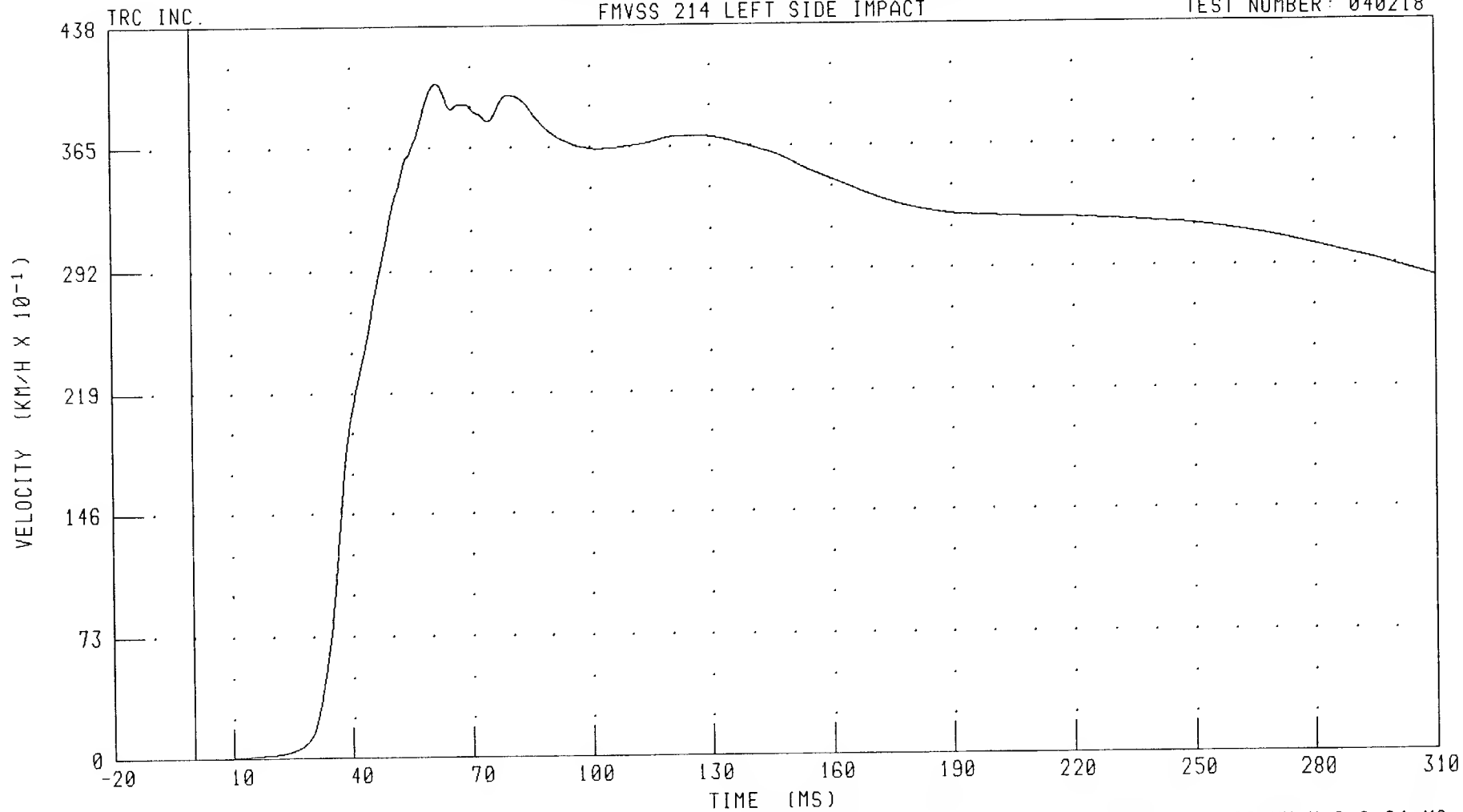
B-84

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYVJ FILTER: CH. CLASS 180

PEAK DATA: 40.35 KM/H @ 61.60 MS; 0.00 KM/H @ 6.64 MS

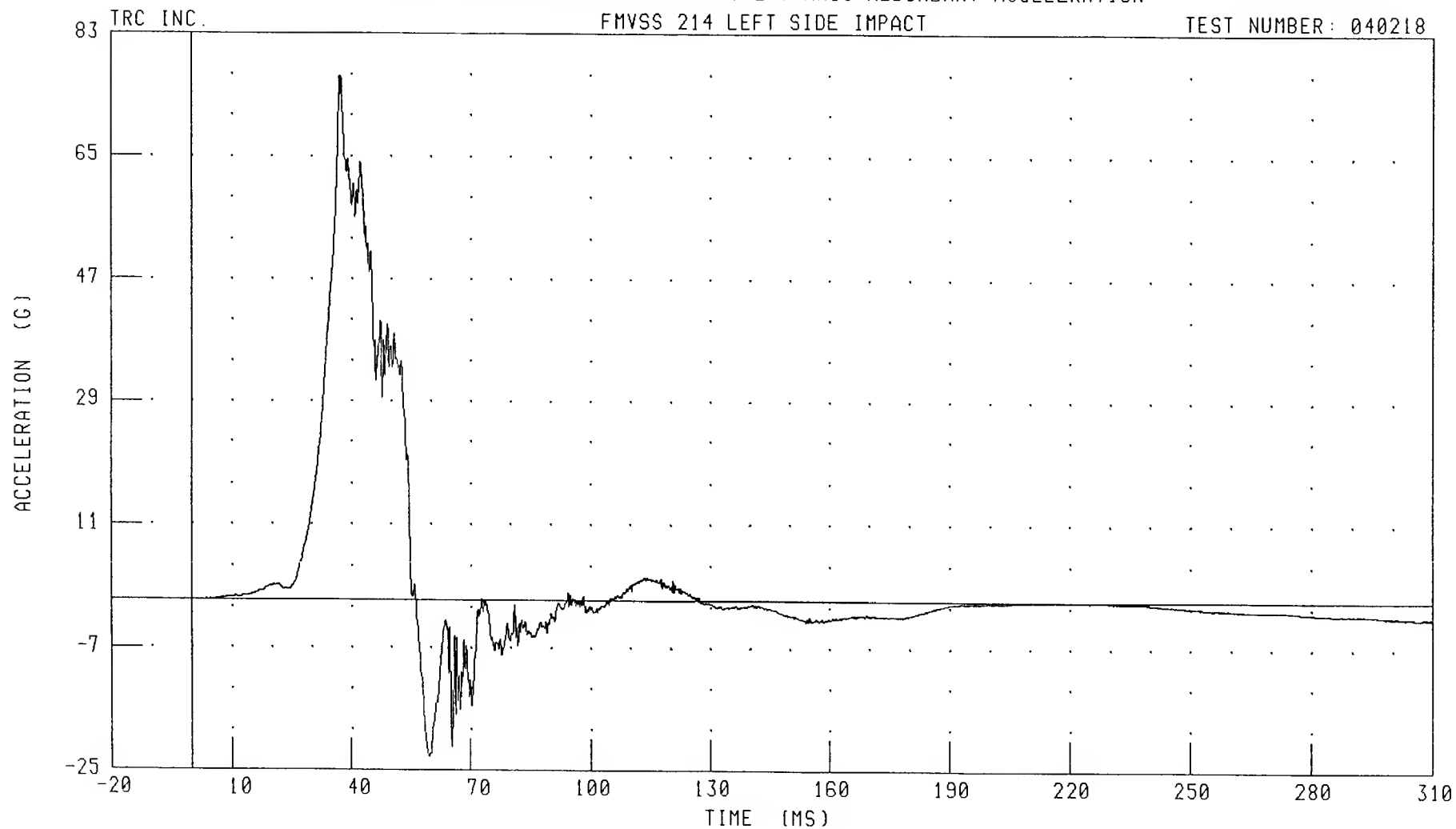
B-85

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YR4 FILTER: CH. CLASS 1000

PEAK DATA: 76.82 G @ 37.04 MS; -23.03 G @ 59.60 MS

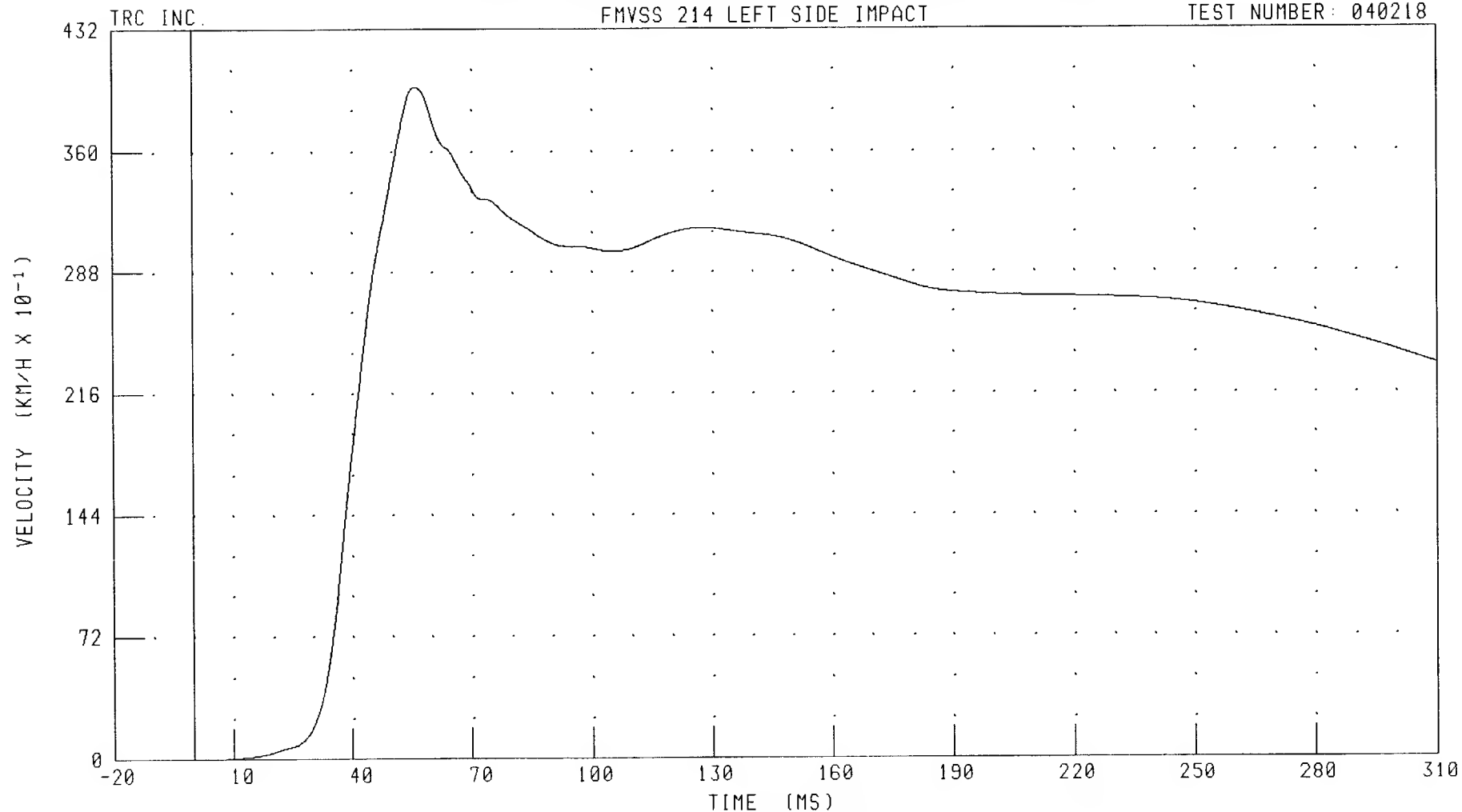
B-86

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YVJ

FILTER: CH. CLASS 180

PEAK DATA: 39.74 KM/H @ 56.00 MS; 0.00 KM/H @ 0.00 MS

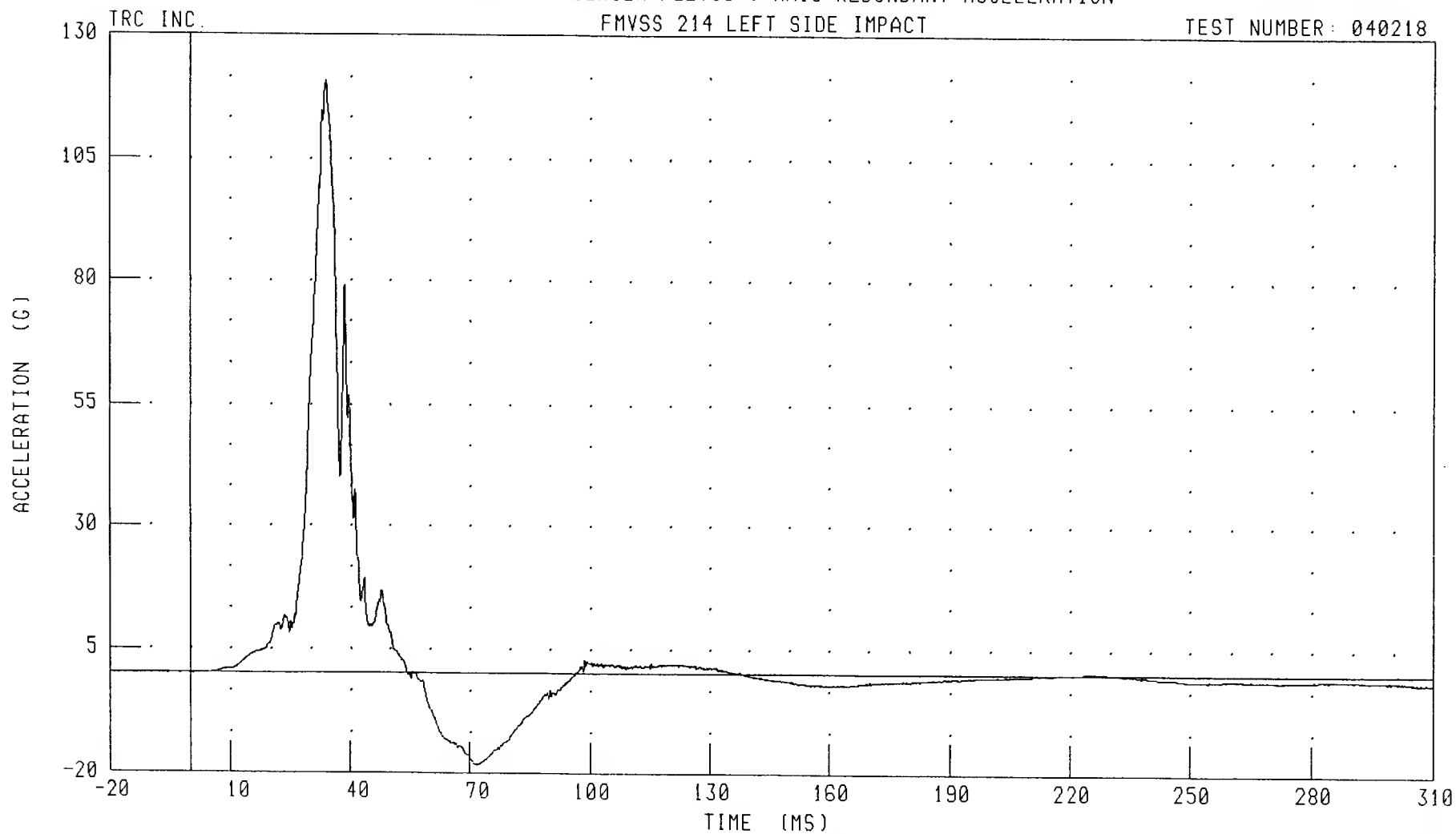
B-87

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYR4 FILTER: CH. CLASS 1000

PEAK DATA: 120.85 G @ 33.84 MS; -18.32 G @ 72.08 MS

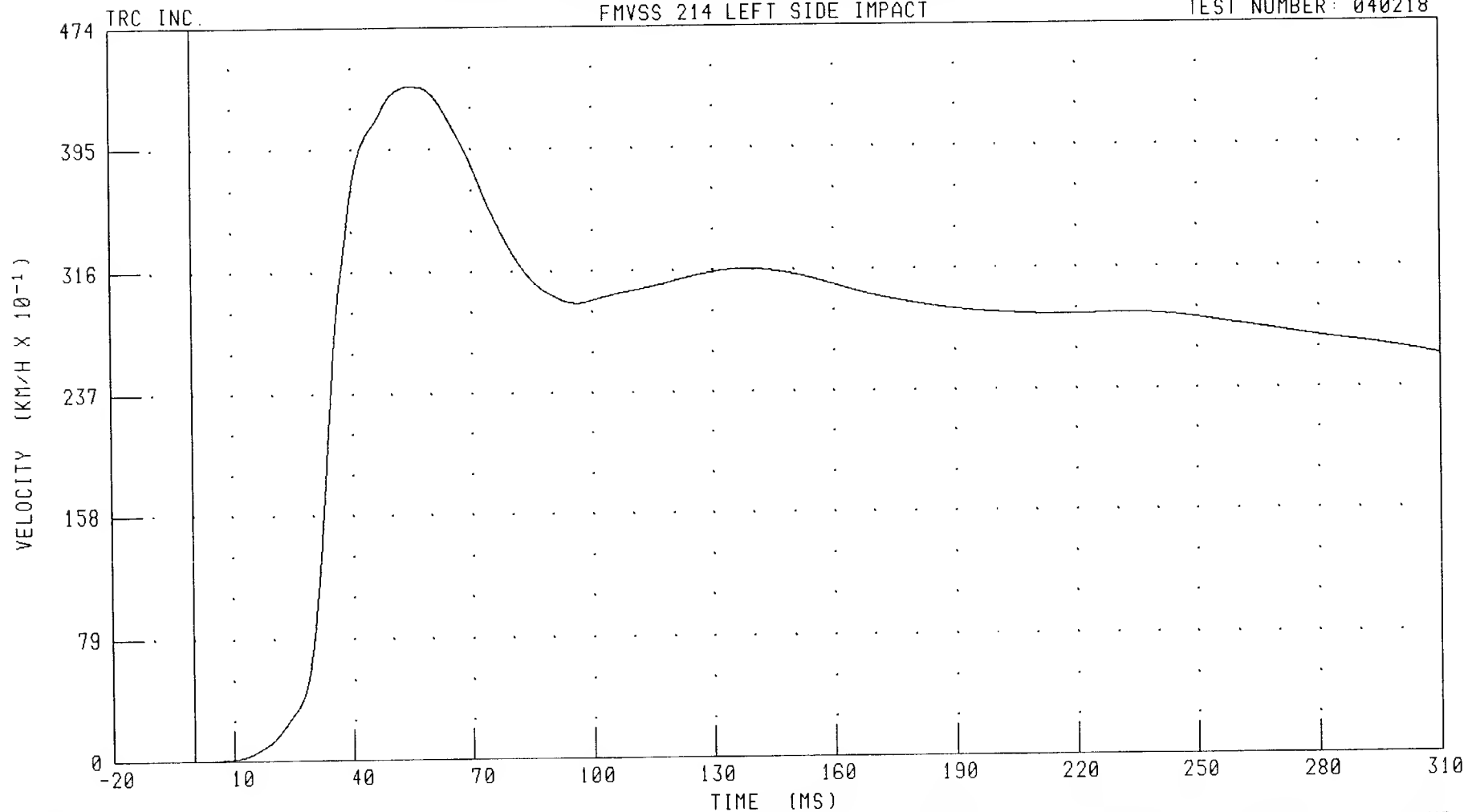
B-88

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYVJ FILTER: CH. CLASS 180

PEAK DATA: 43.52 KM/H @ 54.56 MS; 0.00 KM/H @ 0.00 MS

B-89

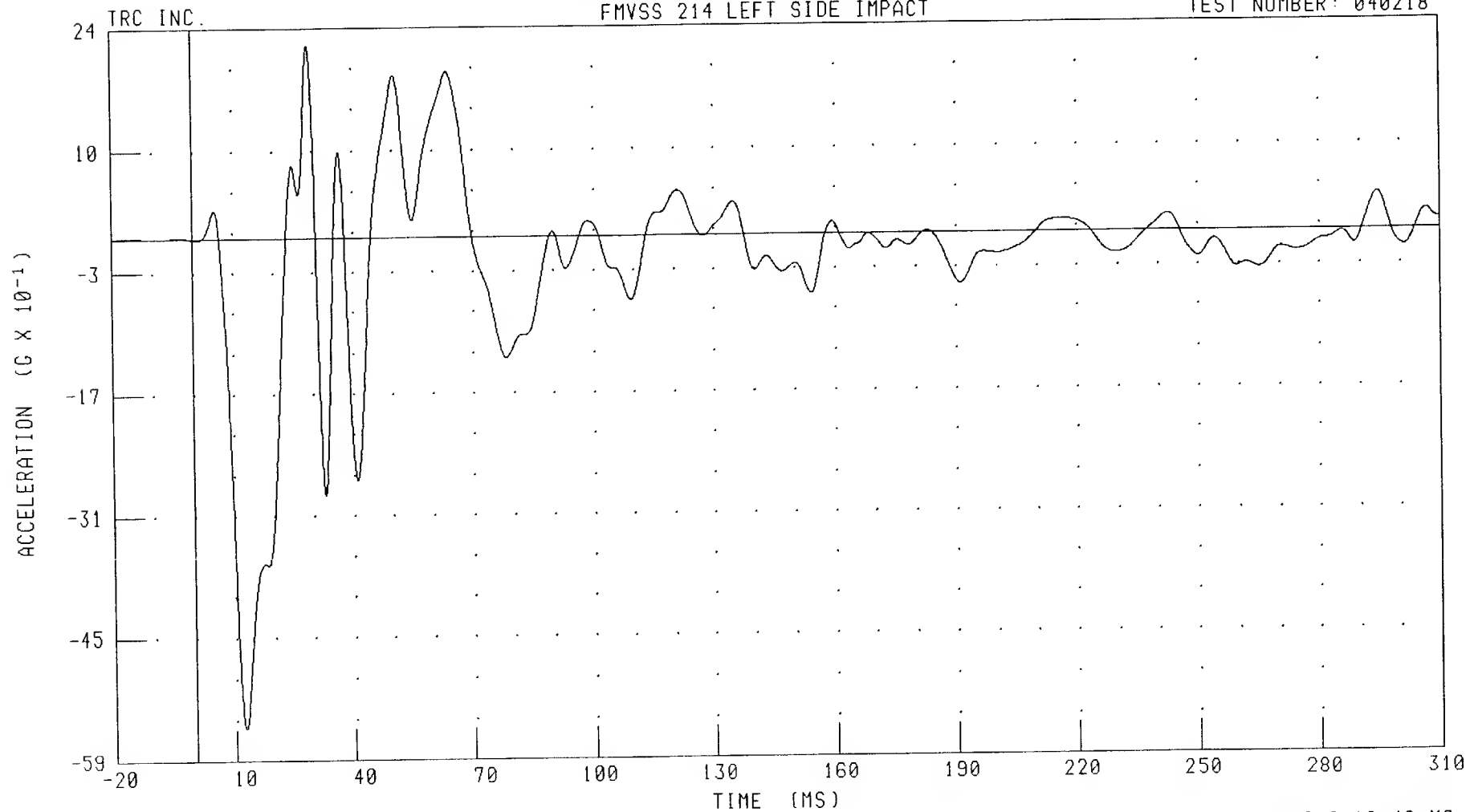
040218

Test Vehicle Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSXC1 FILTER: CH. CLASS 60

PEAK DATA: 2.20 G @ 29.12 MS; -5.63 G @ 12.48 MS

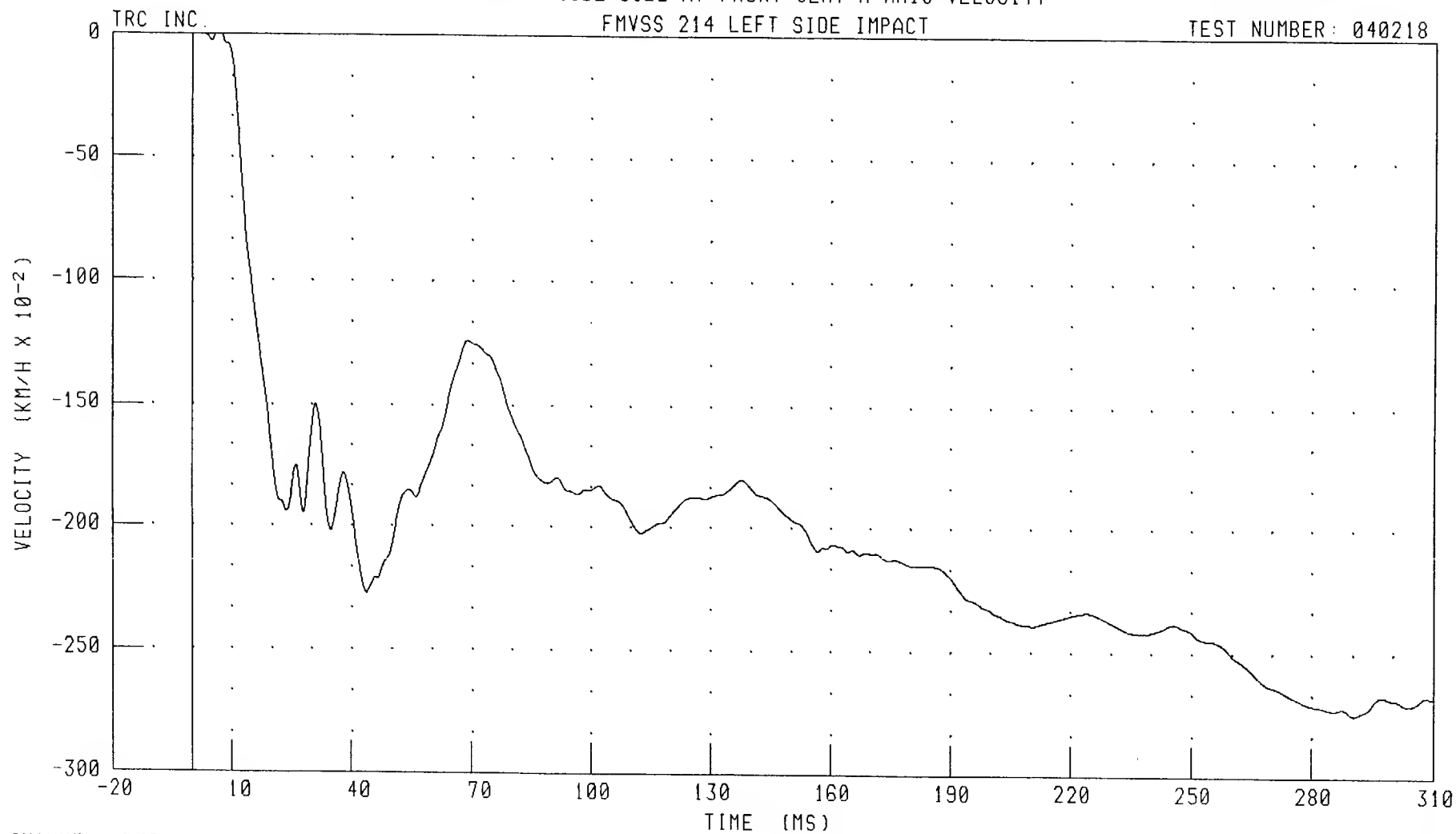
B-91

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSXV1

FILTER: CH. CLASS 180

PEAK DATA: 0.05 KM/H @ 6.64 MS; -2.75 KM/H @ 290.32 MS

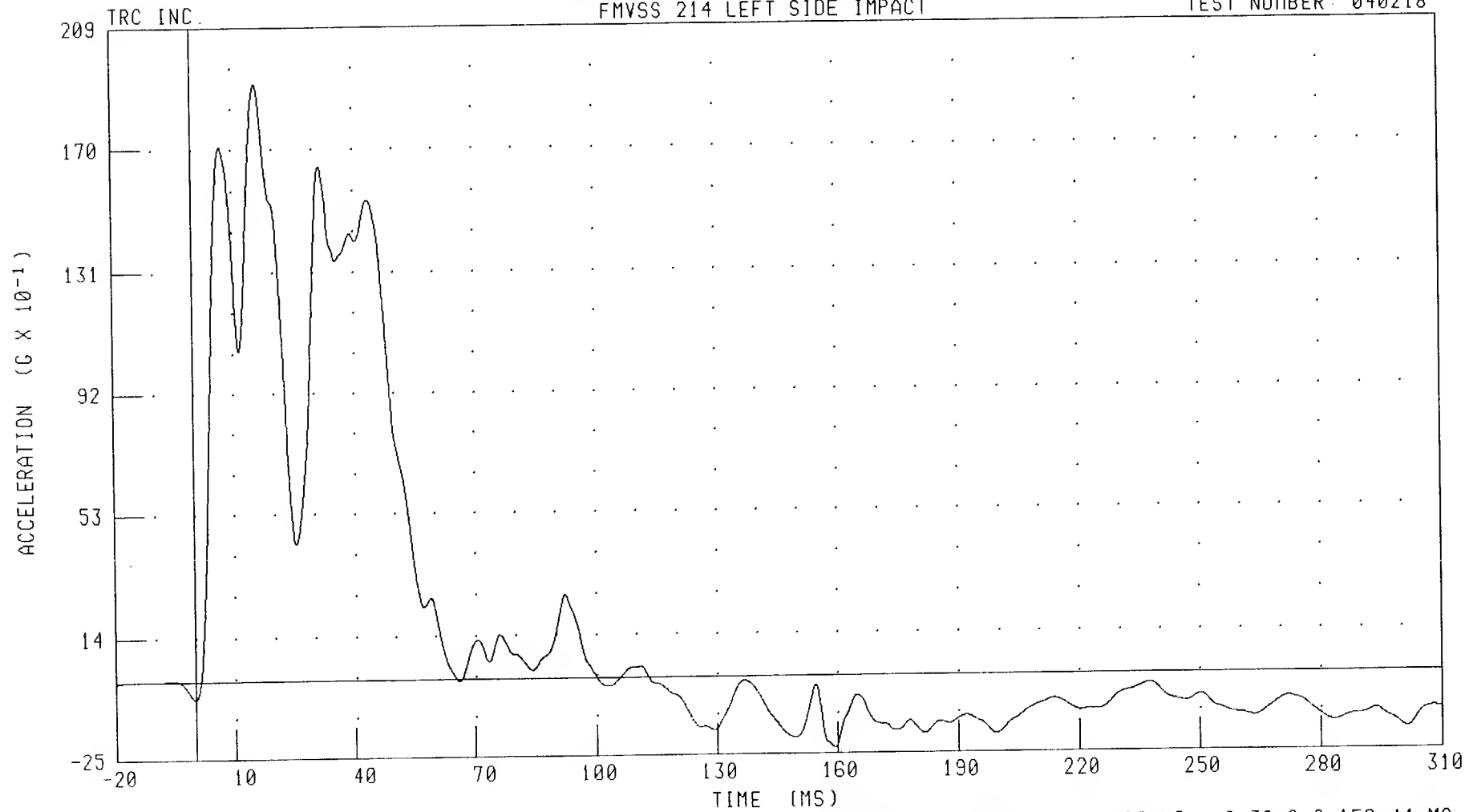
B-92

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSYG1 FILTER: CH. CLASS 60

PEAK DATA: 19 10 G @ 16 00 MS; -2.32 G @ 159.44 MS

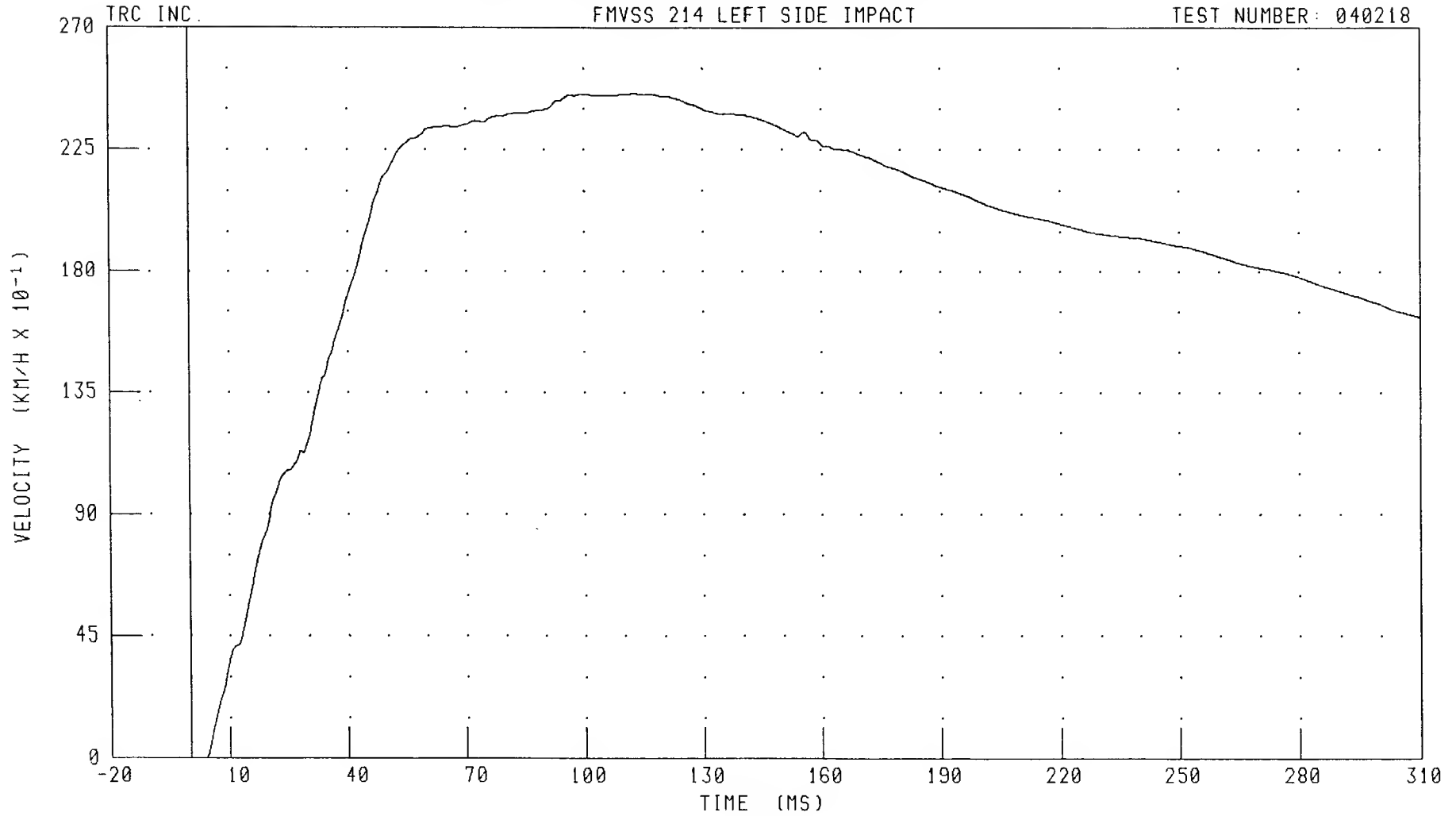
B-93

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSYV1 FILTER: CH. CLASS 180

PEAK DATA: 24.58 KM/H @ 112.72 MS; -0.02 KM/H @ 3.36 MS

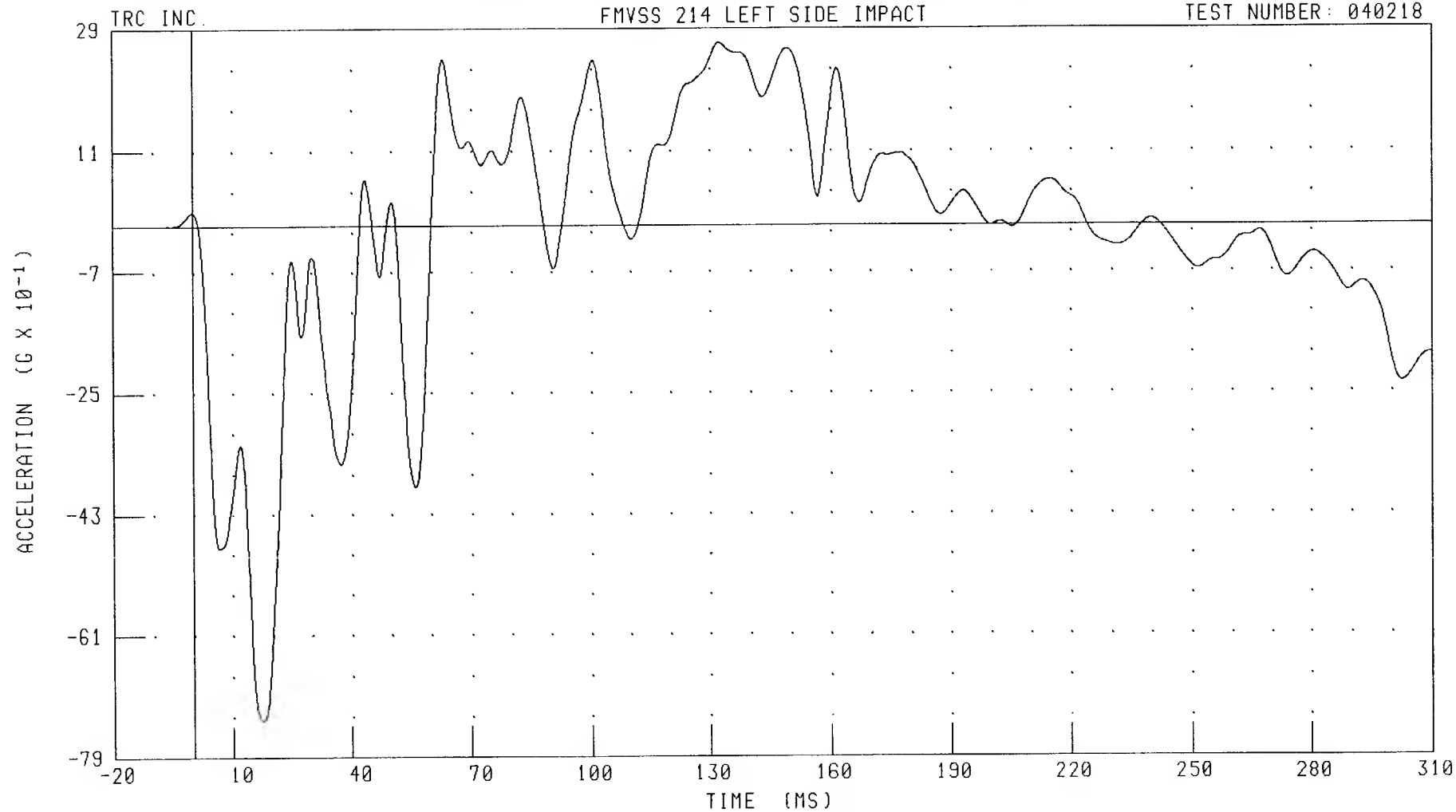
B-94

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSZG1 FILTER: CH. CLASS 60

PEAK DATA: 2.69 G @ 132.40 MS; -7.36 G @ 17.52 MS

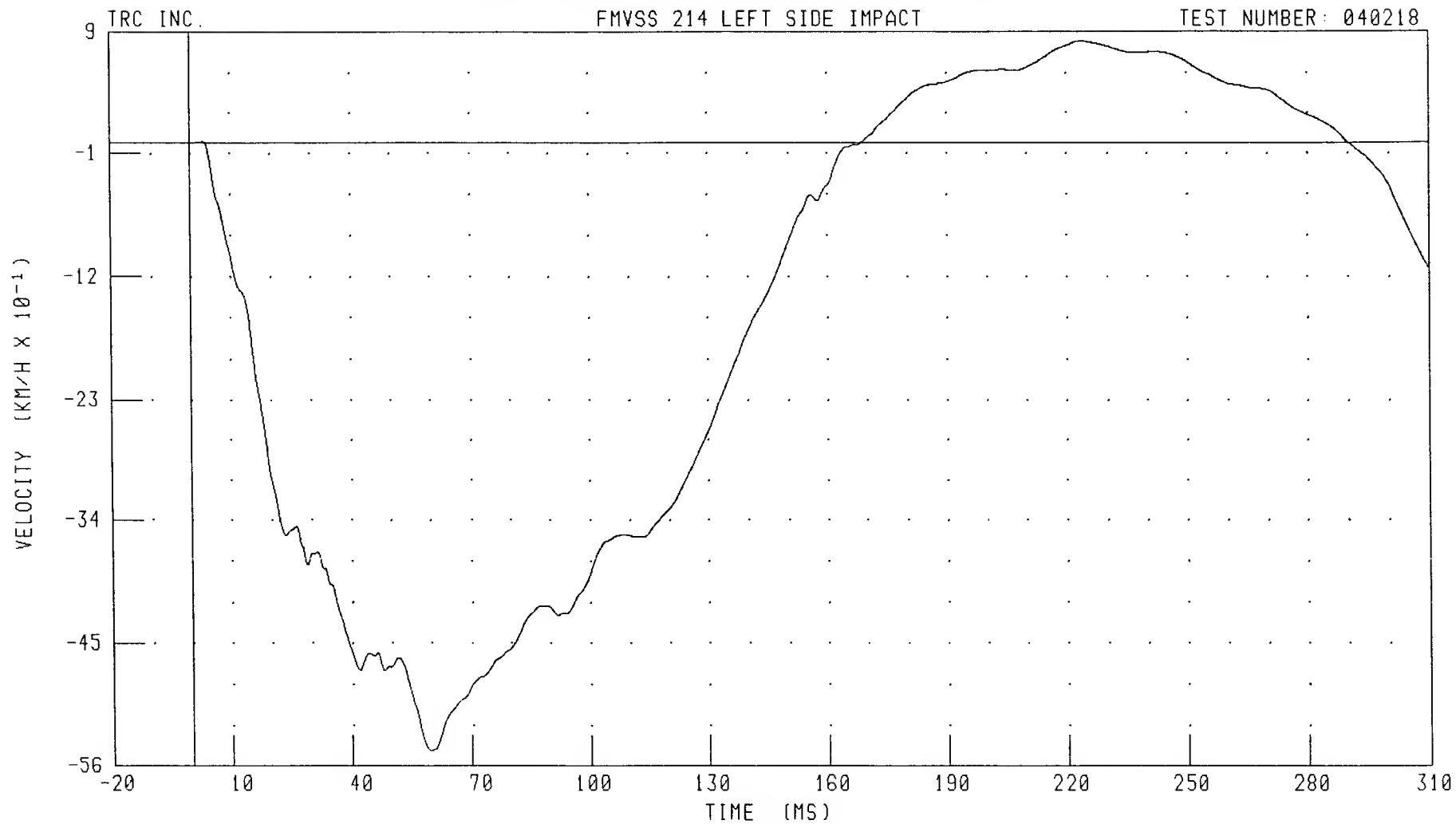
B-95

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSZV1 FILTER: CH. CLASS 180

PEAK DATA: 0.92 KM/H @ 223.68 MS; -5.46 KM/H @ 59.76 MS

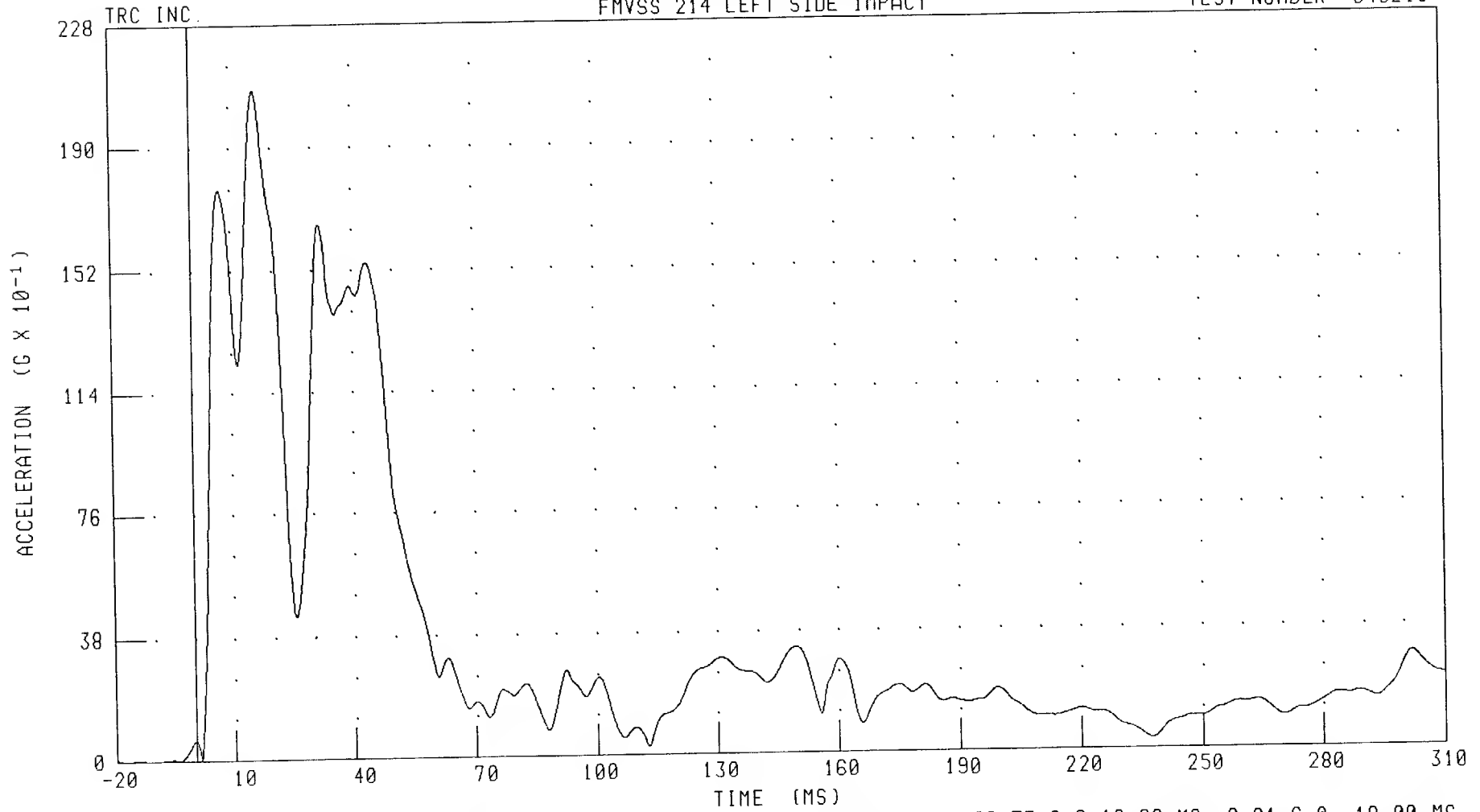
B-96

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RFSRG1

FILTER: CH. CLASS 60

PEAK DATA: 20.77 G @ 16.08 MS; 0.01 G @ -18.00 MS

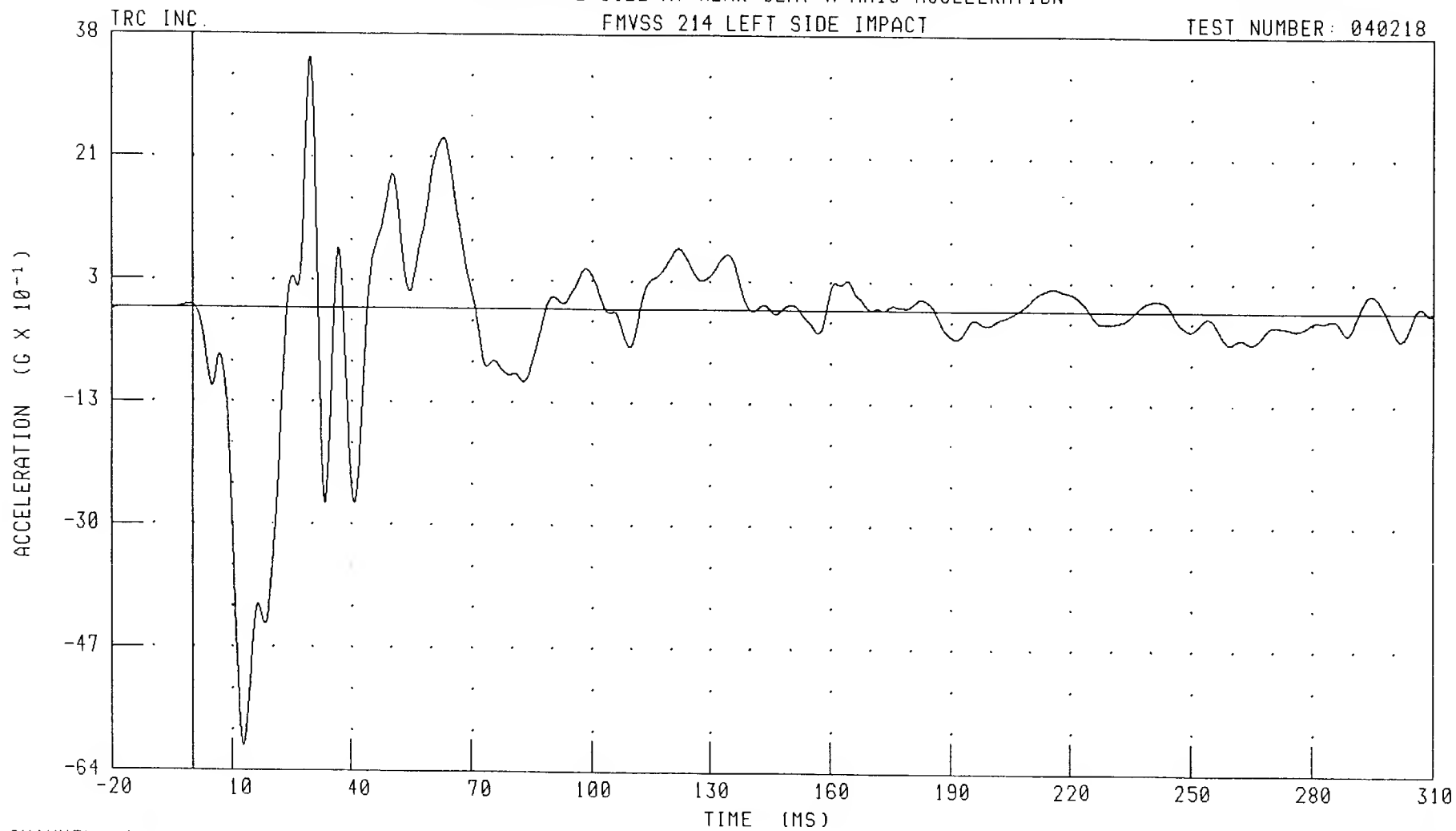
B-97

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSXC1 FILTER: CH. CLASS 60

PEAK DATA: 3.47 G @ 29.60 MS; -6.05 G @ 12.80 MS

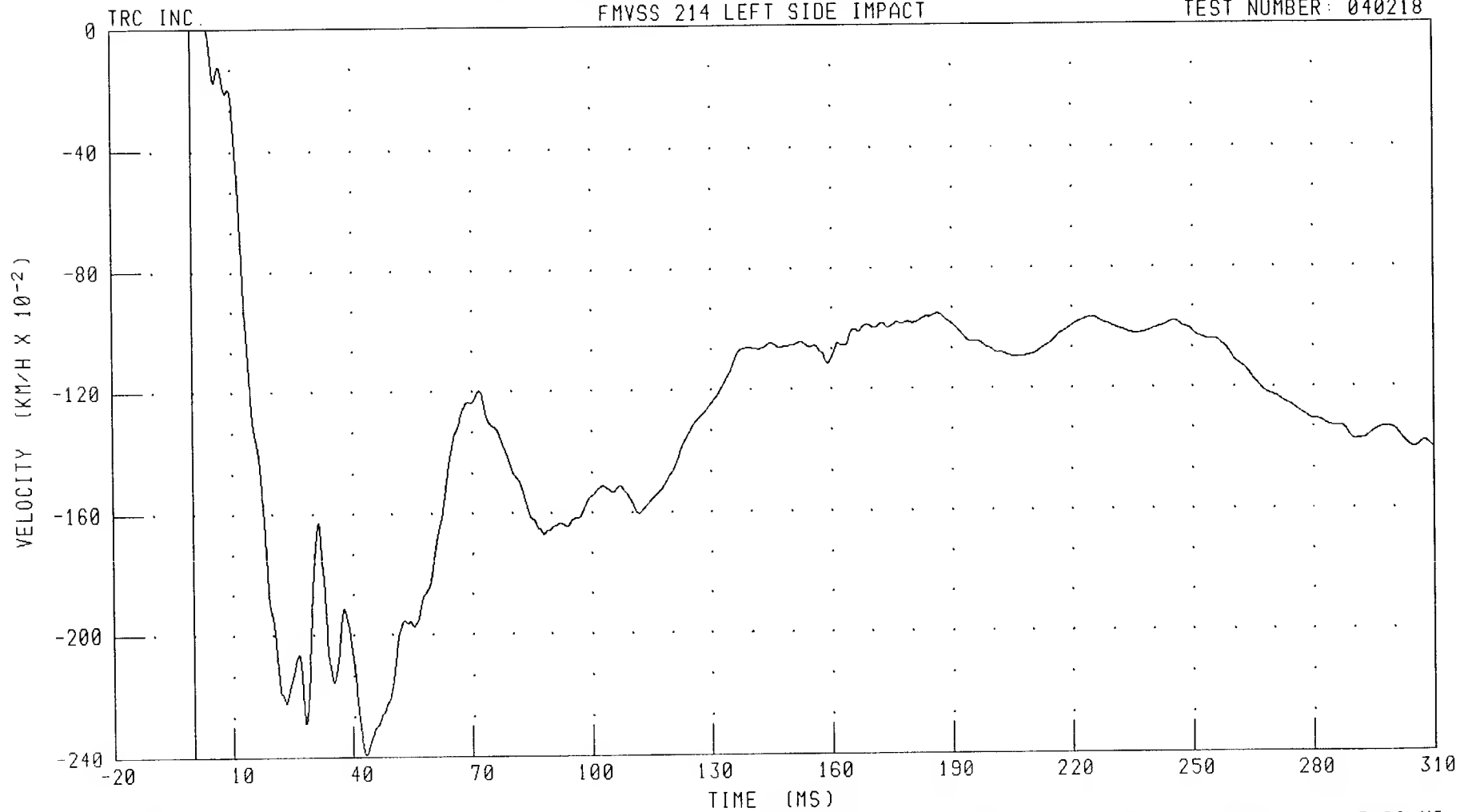
B-98

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.01 KM/H @ 3.52 MS; -2.39 KM/H @ 43.20 MS

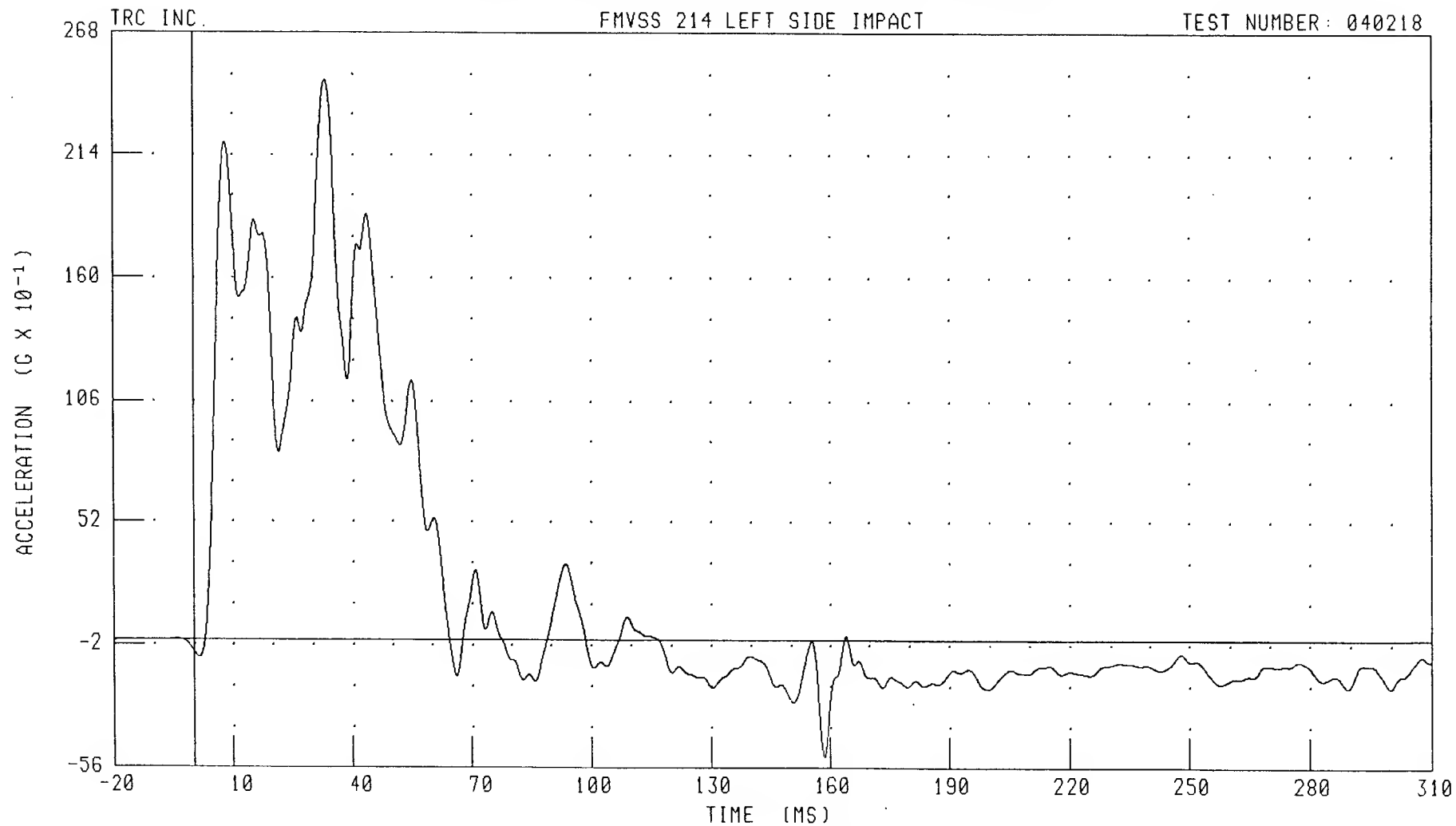
B-99

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSYC1

FILTER: CH. CLASS 60

PEAK DATA: 24.73 G @ 33.28 MS; -5.12 G @ 158.56 MS

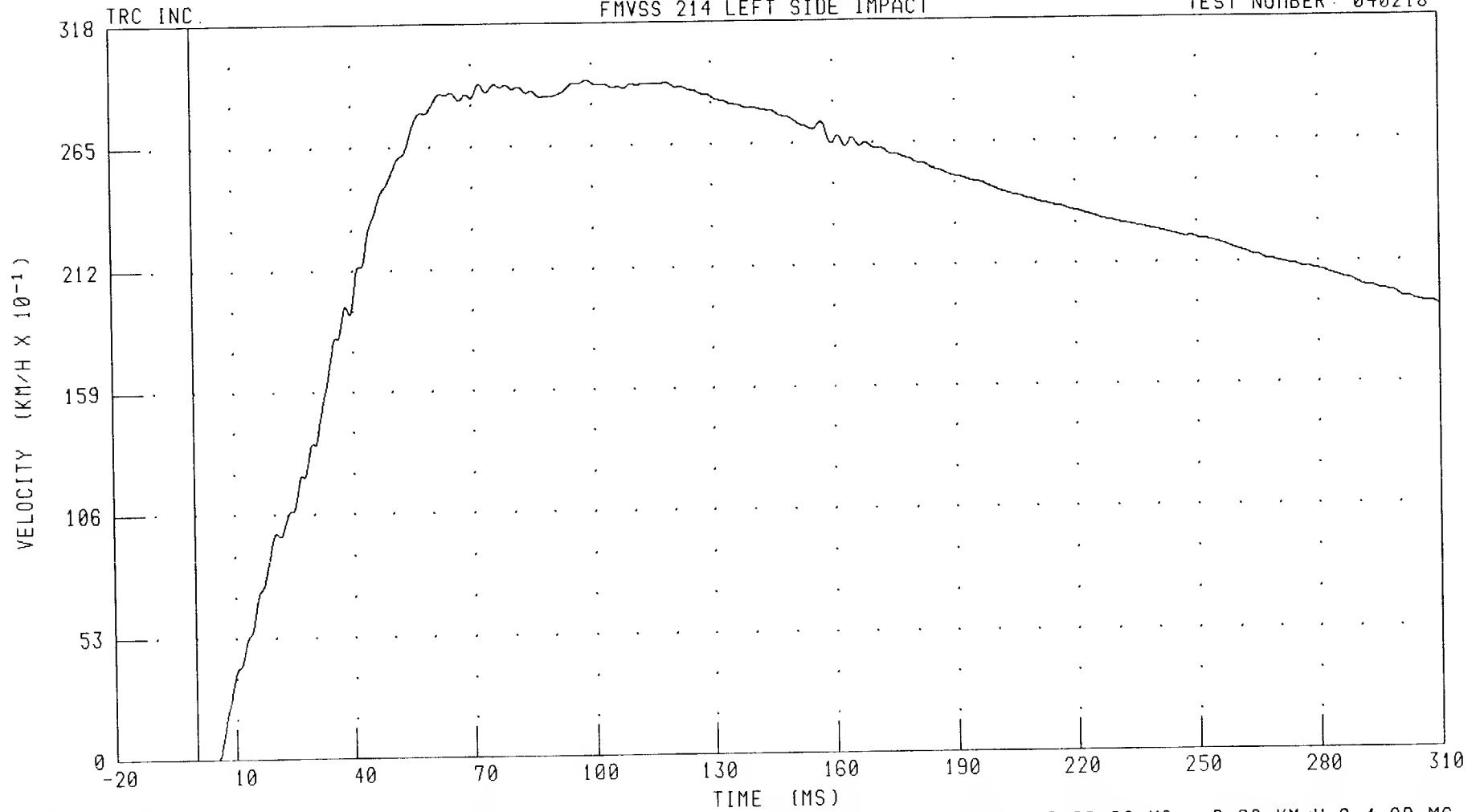
B-100

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSYV1 FILTER: CH CLASS 180

PEAK DATA: 29.31 KM/H @ 98.96 MS; -0.02 KM/H @ 4.80 MS

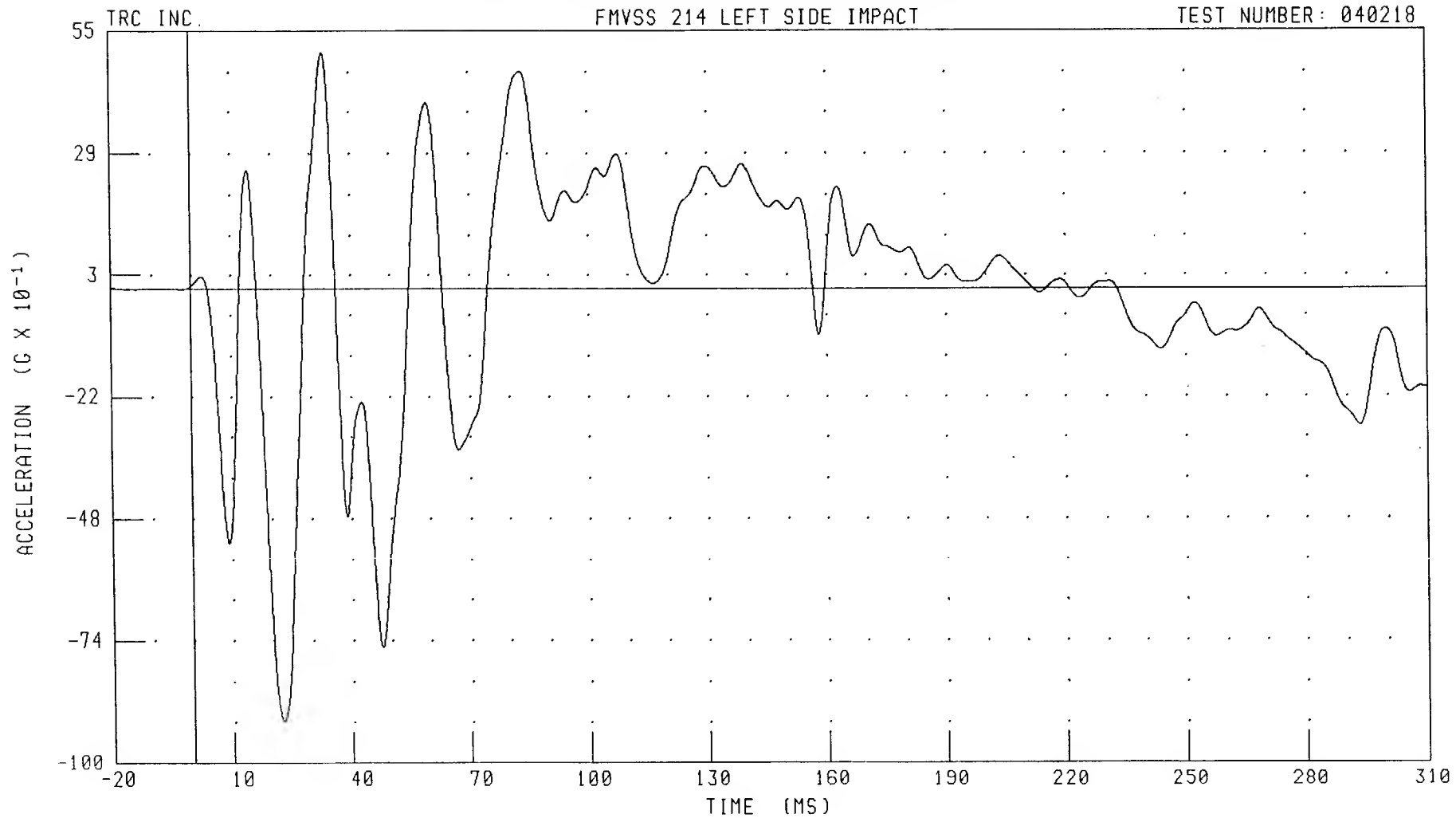
B-101

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSZG1

FILTER: CH. CLASS 60

PEAK DATA: 5.05 G @ 33.52 MS; -9.22 G @ 22.72 MS

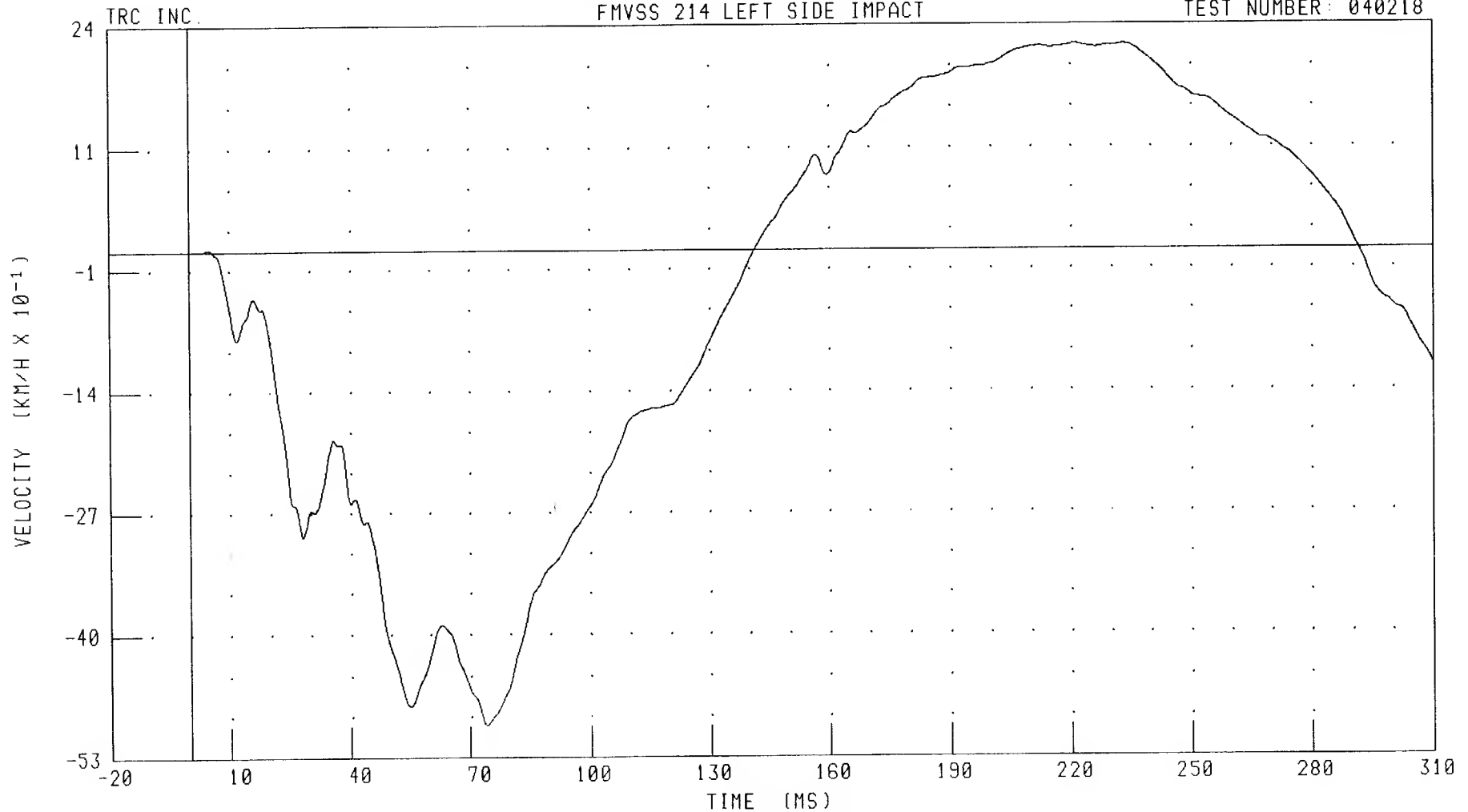
B-102

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRSZV1

FILTER: CH. CLASS 180

PEAK DATA: 2.19 KM/H @ 221.04 MS; -5.06 KM/H @ 74.08 MS

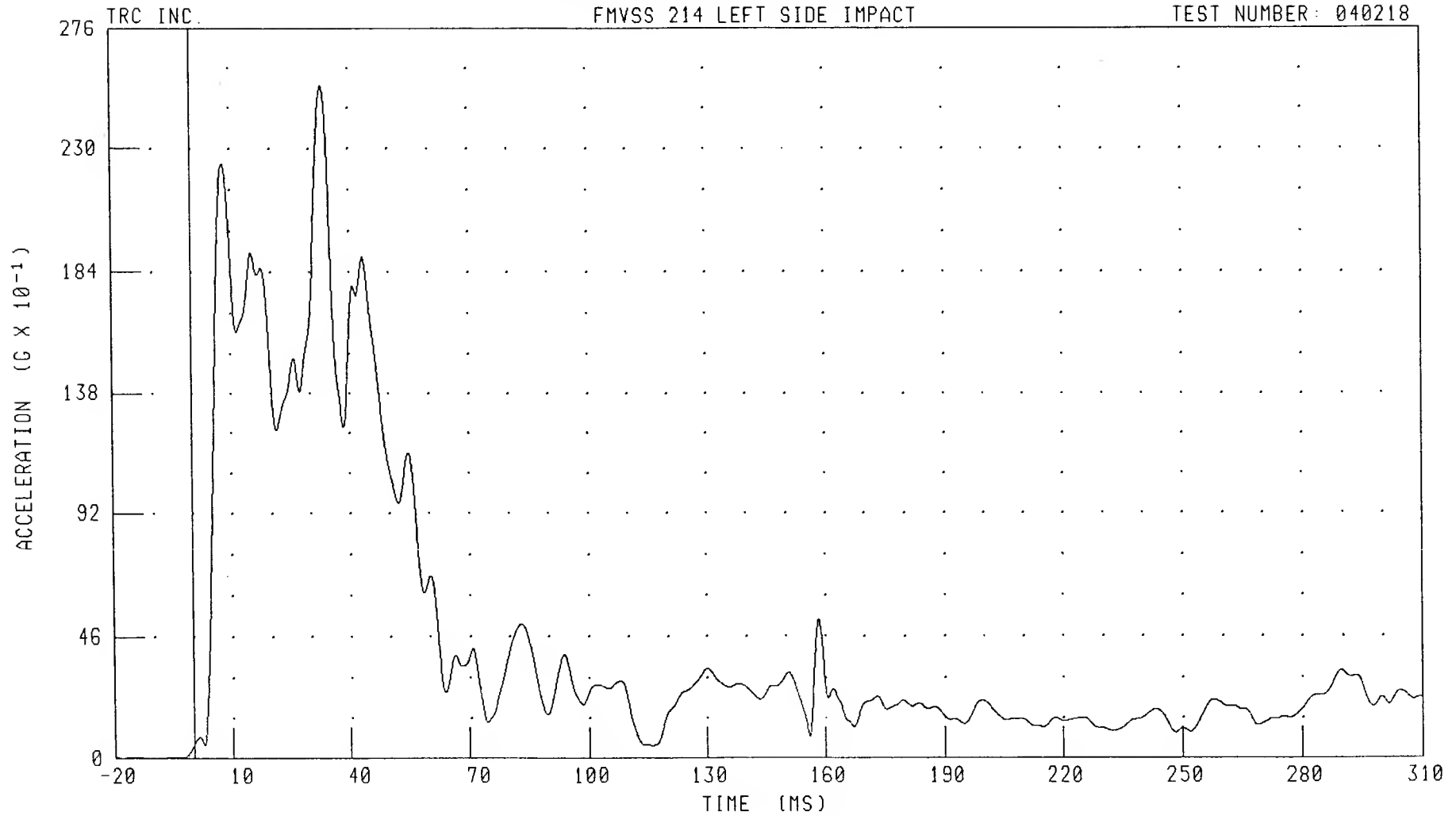
B-103

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



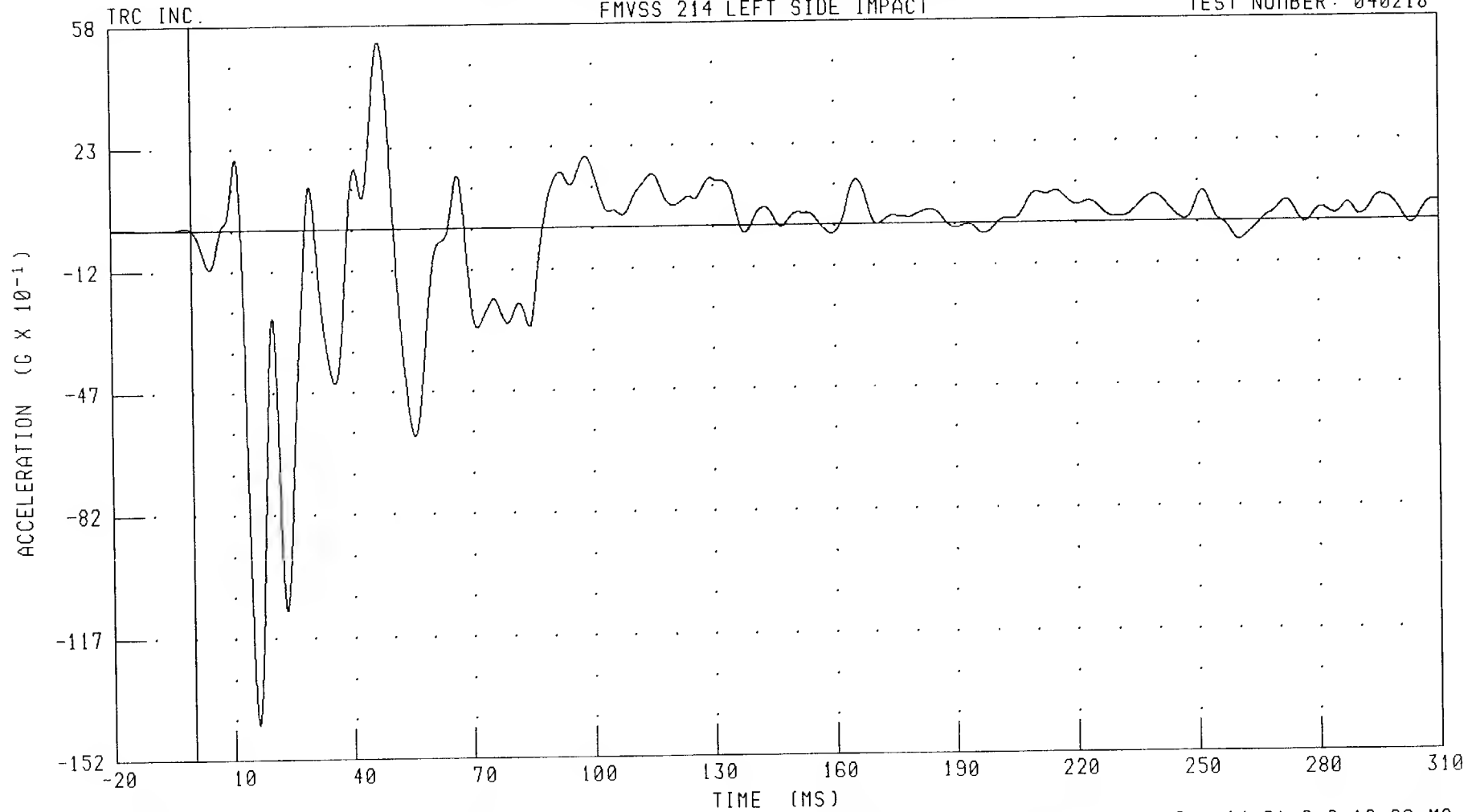
B-104

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKXC1 FILTER: CH. CLASS 60

PEAK DATA: 5.32 G @ 47.04 MS; -14.21 G @ 16.00 MS

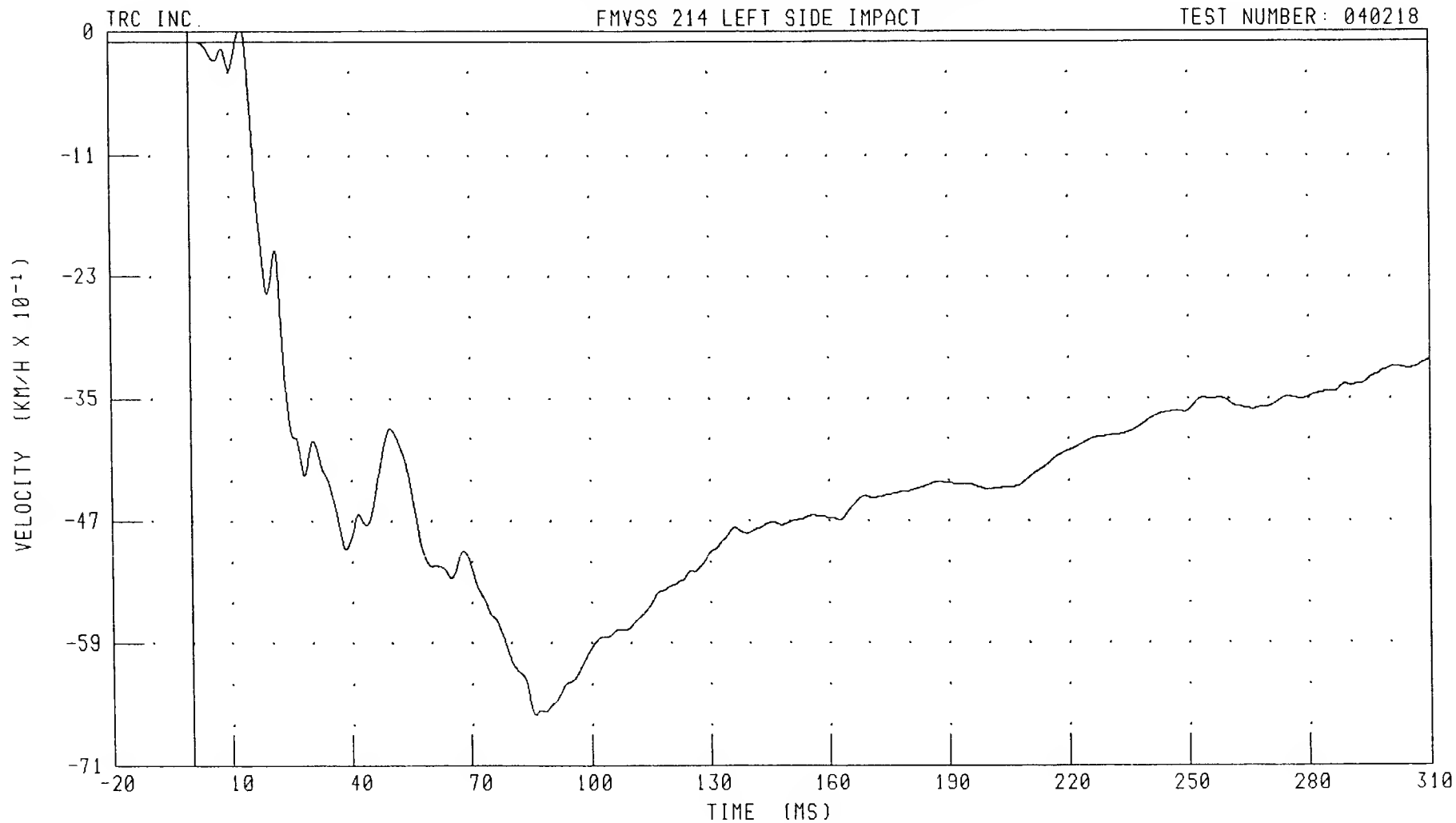
B-105

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.16 KM/H @ 13.20 MS; -6.61 KM/H @ 86.00 MS

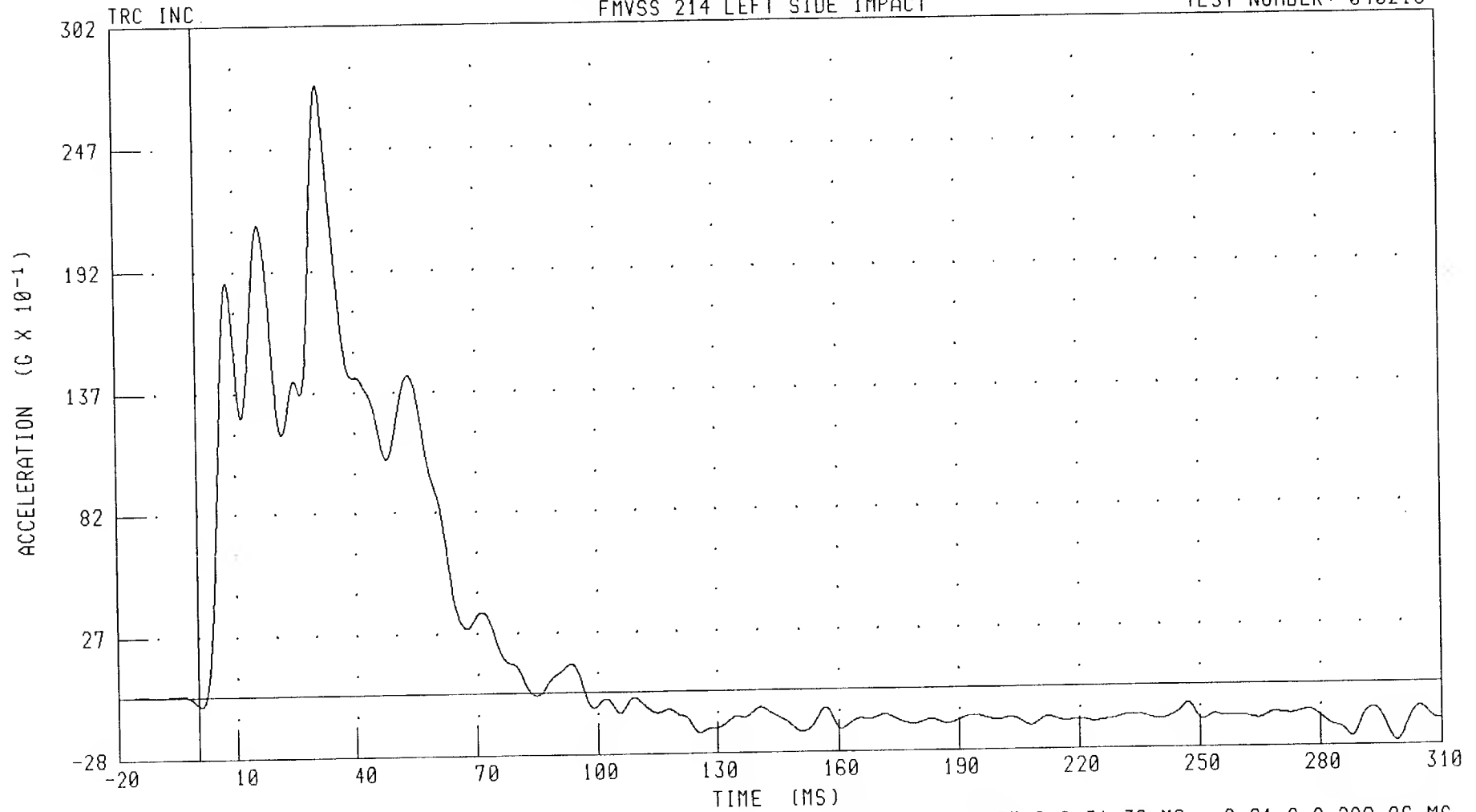
B-106

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKYG1 FILTER: CH. CLASS 60

PEAK DATA: 27.55 G @ 31.36 MS; -2.61 G @ 298.96 MS

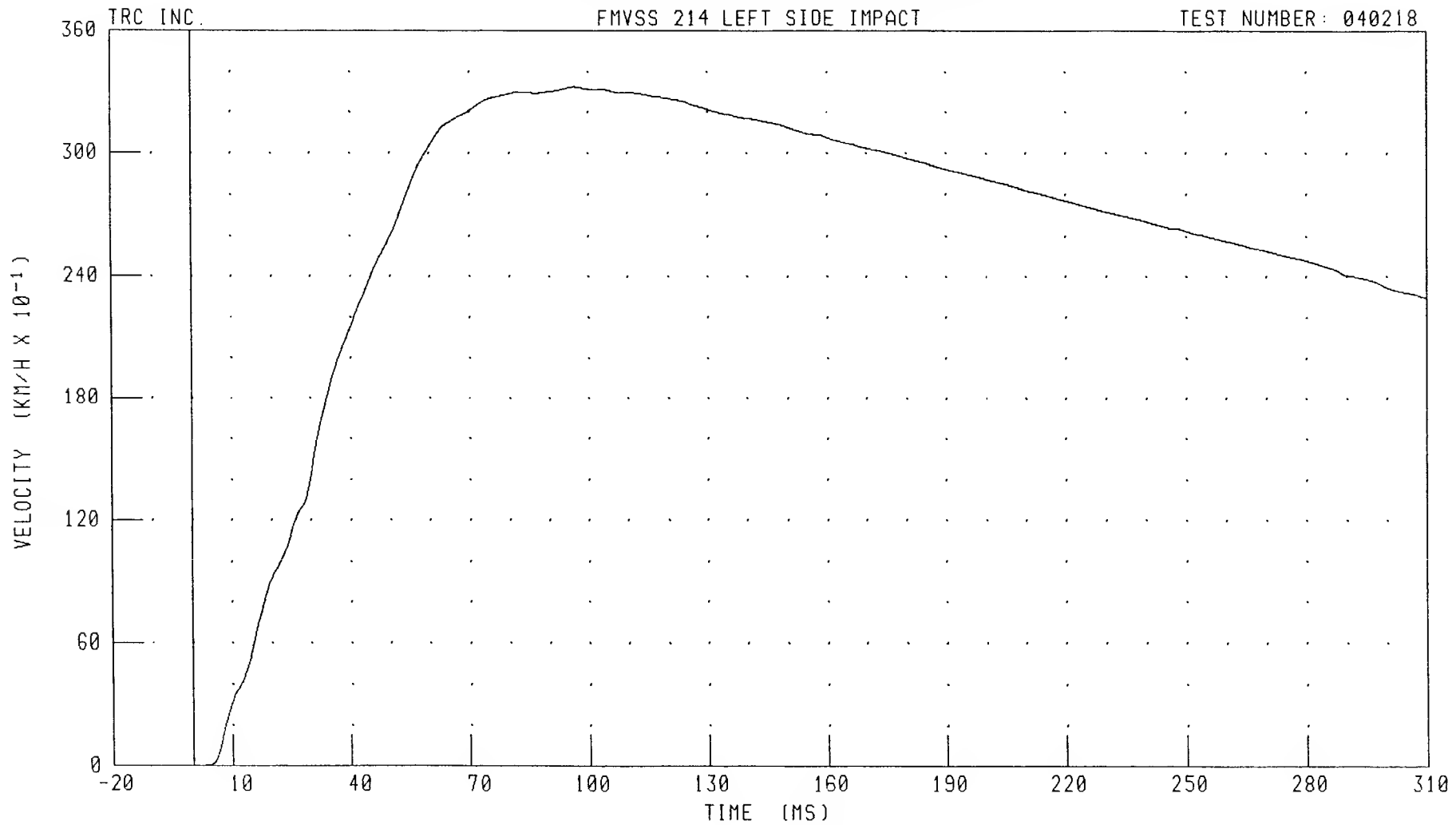
B-107

040218

55/2B KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKYV1 FILTER: CH. CLASS 180

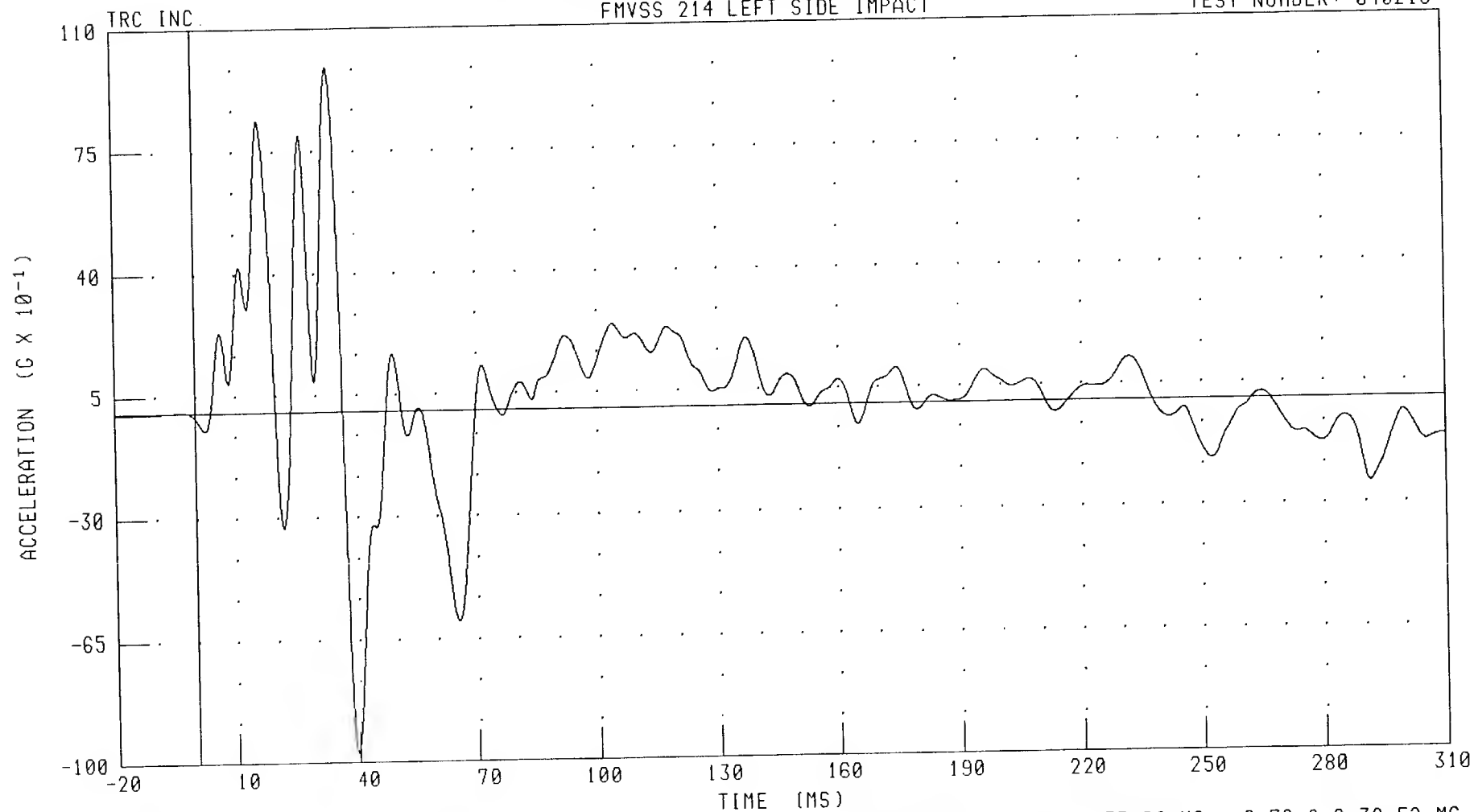
PEAK DATA: 33.25 KM/H @ 96.64 MS; 0.00 KM/H @ 0.00 MS

B-108

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE Z-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKZG1 FILTER: CH. CLASS 60

PEAK DATA: 9.88 G @ 33.60 MS; -9.72 G @ 39.52 MS

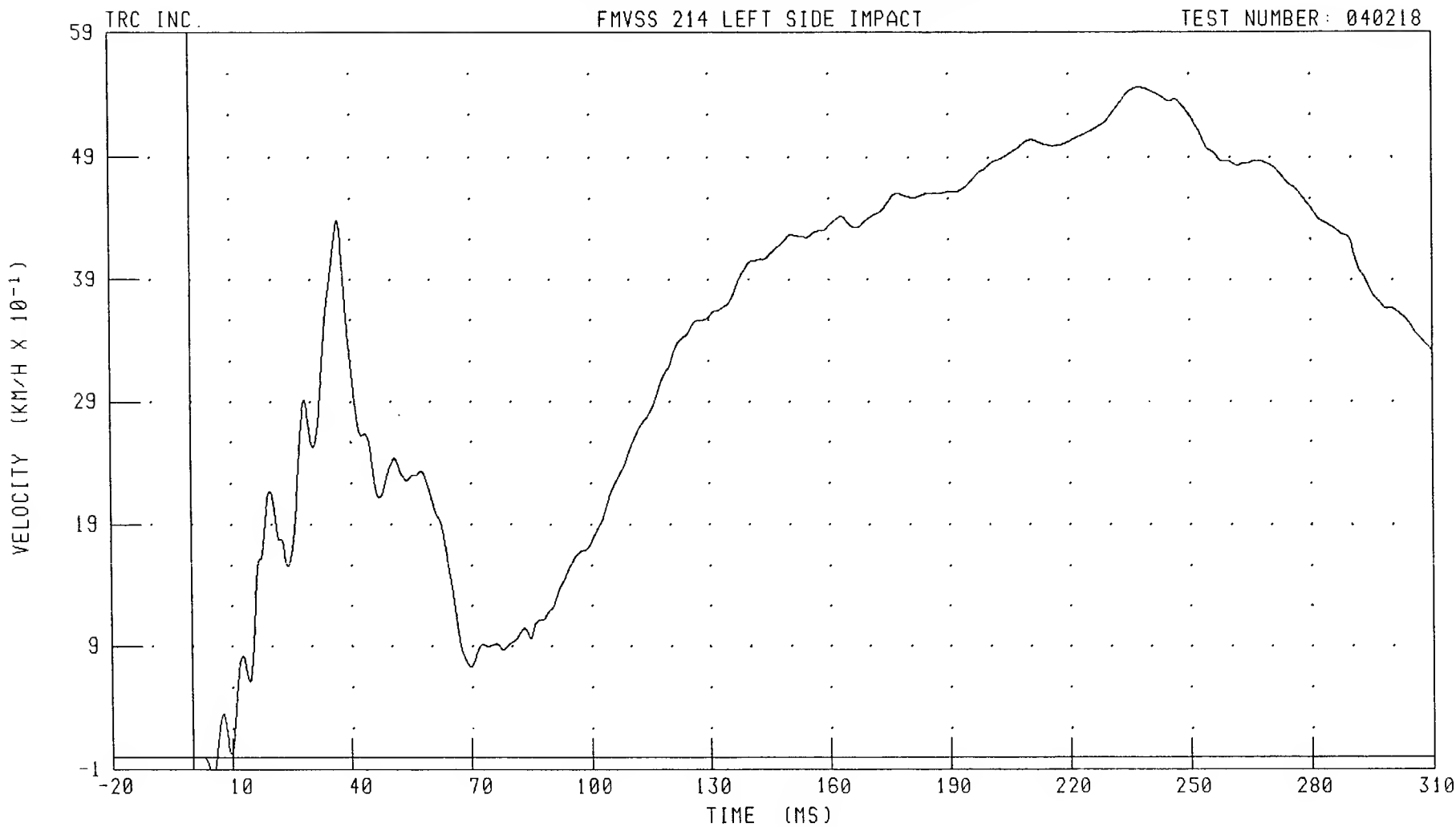
B-109

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RDKZV1 FILTER: CH. CLASS 180

PEAK DATA: 5.45 KM/H @ 237.68 MS; -0.15 KM/H @ 5.04 MS

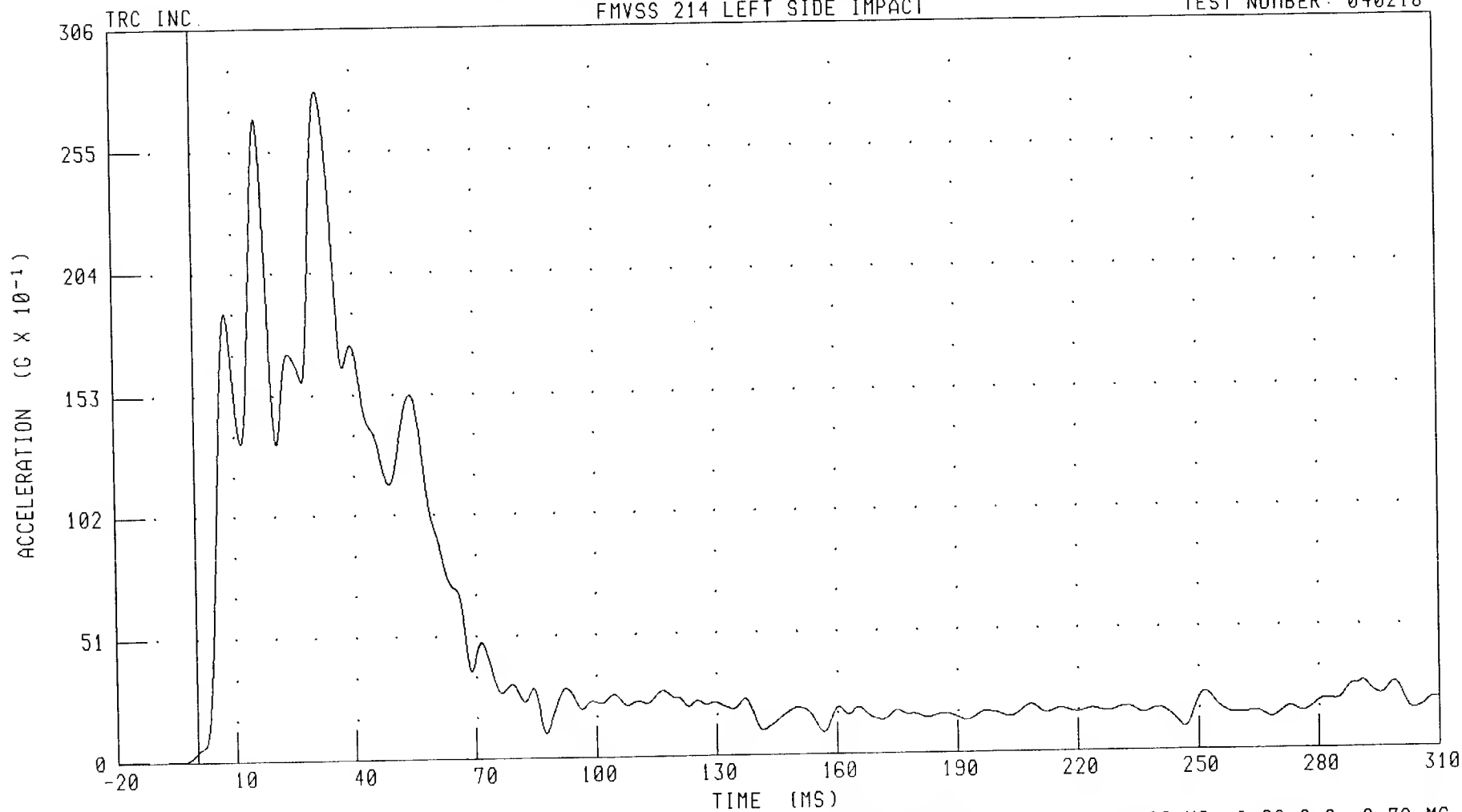
B-110

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



PEAK DATA: 28.01 G @ 31.68 MS; 0.00 G @ -8.72 MS

CHANNEL: RDKRG1 FILTER: CH. CLASS 60

B-111

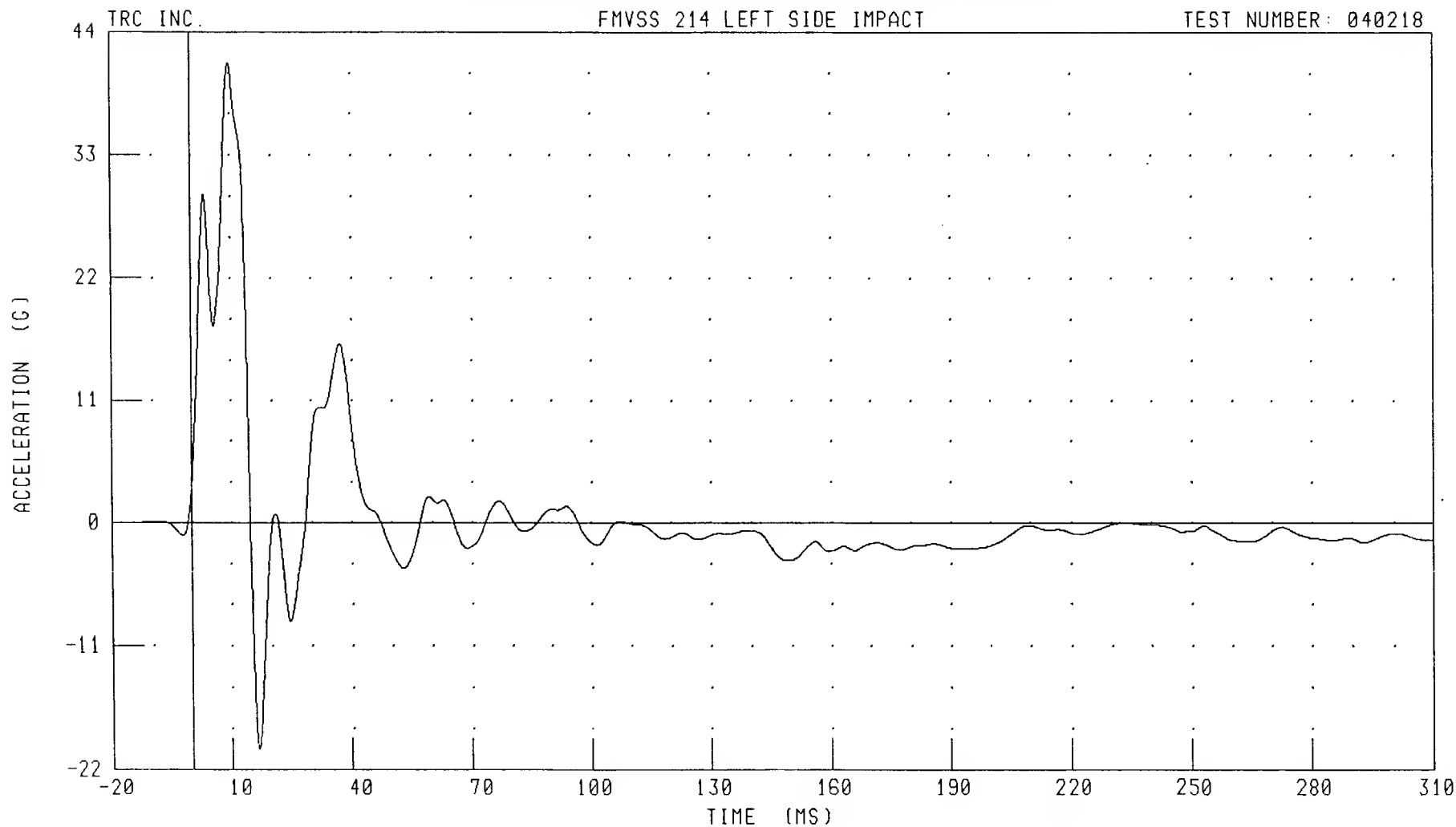
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

LEFT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LFSYG1 FILTER: CH. CLASS 60

PEAK DATA: 41.24 G @ 9.84 MS; -20.15 G @ 16.72 MS

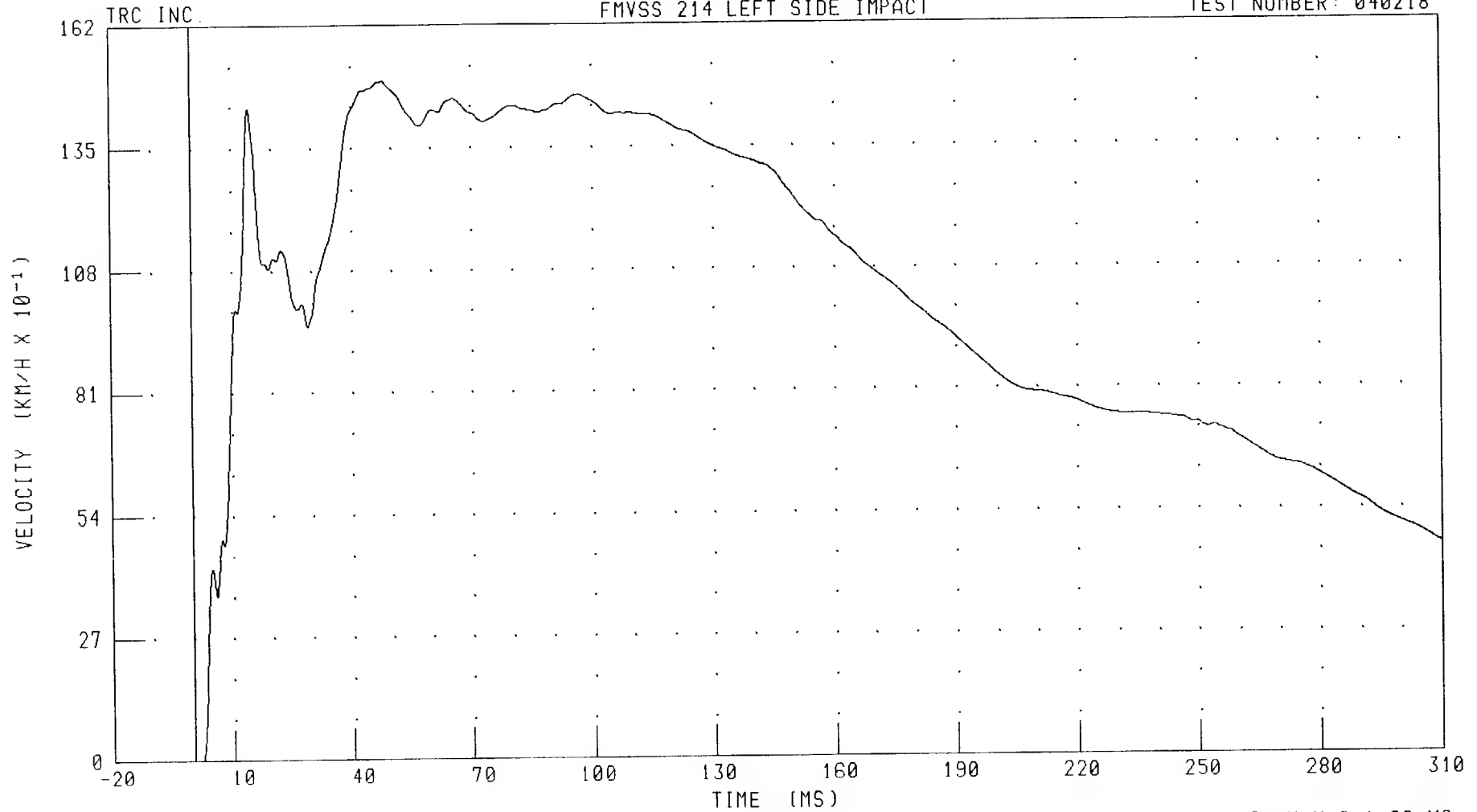
B-112

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LFSYV1 FILTER: CH. CLASS 180

PEAK DATA: 14.97 KM/H @ 47.92 MS; -0.06 KM/H @ 1.68 MS

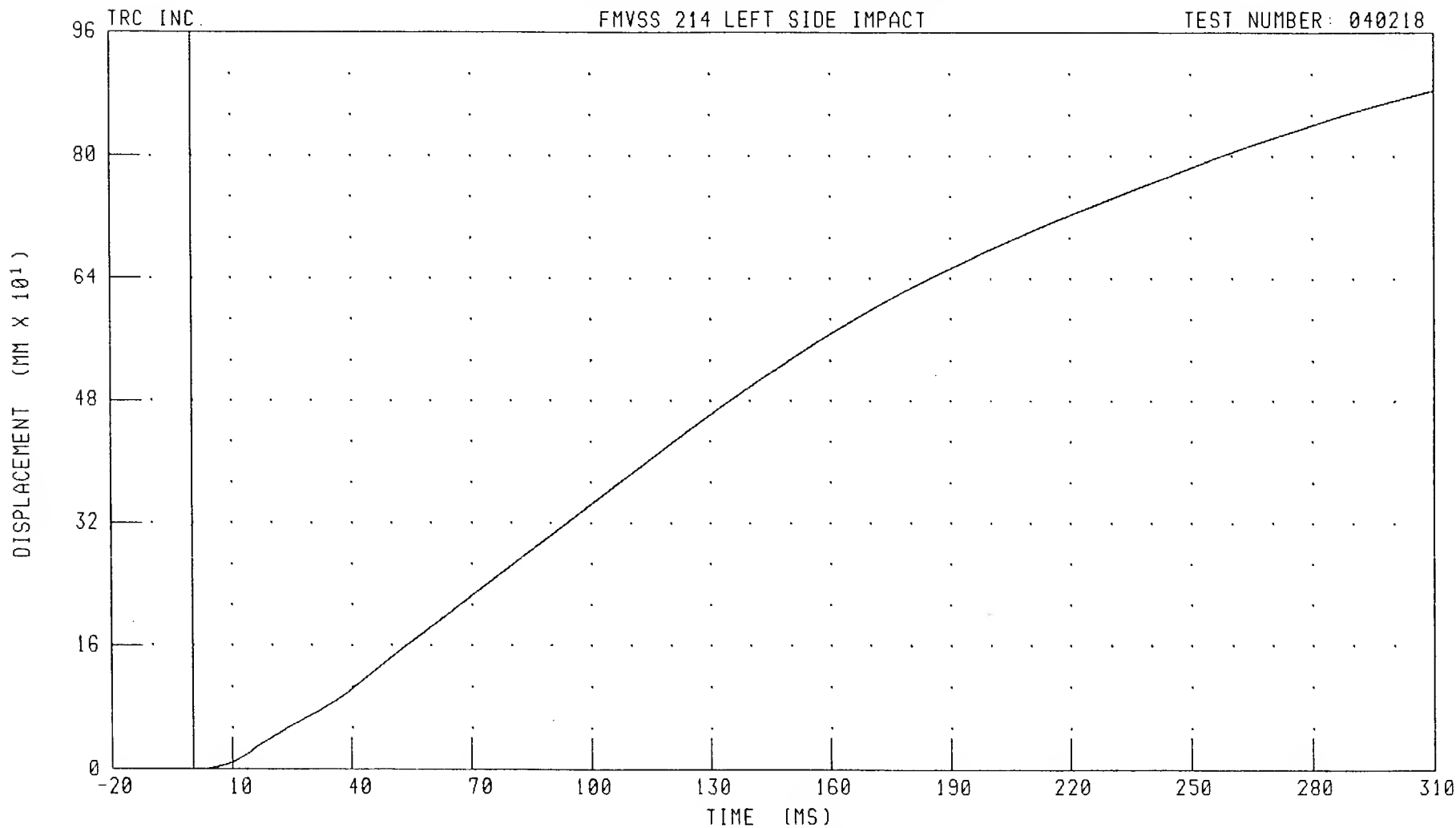
B-113

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT SIDE SILL AT FRONT SEAT Y-AXIS DISPLACEMENT

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LFSYD1 FILTER: CH. CLASS 180

PEAK DATA: 885.54 MM @ 310.00 MS; -0.02 MM @ 2.16 MS

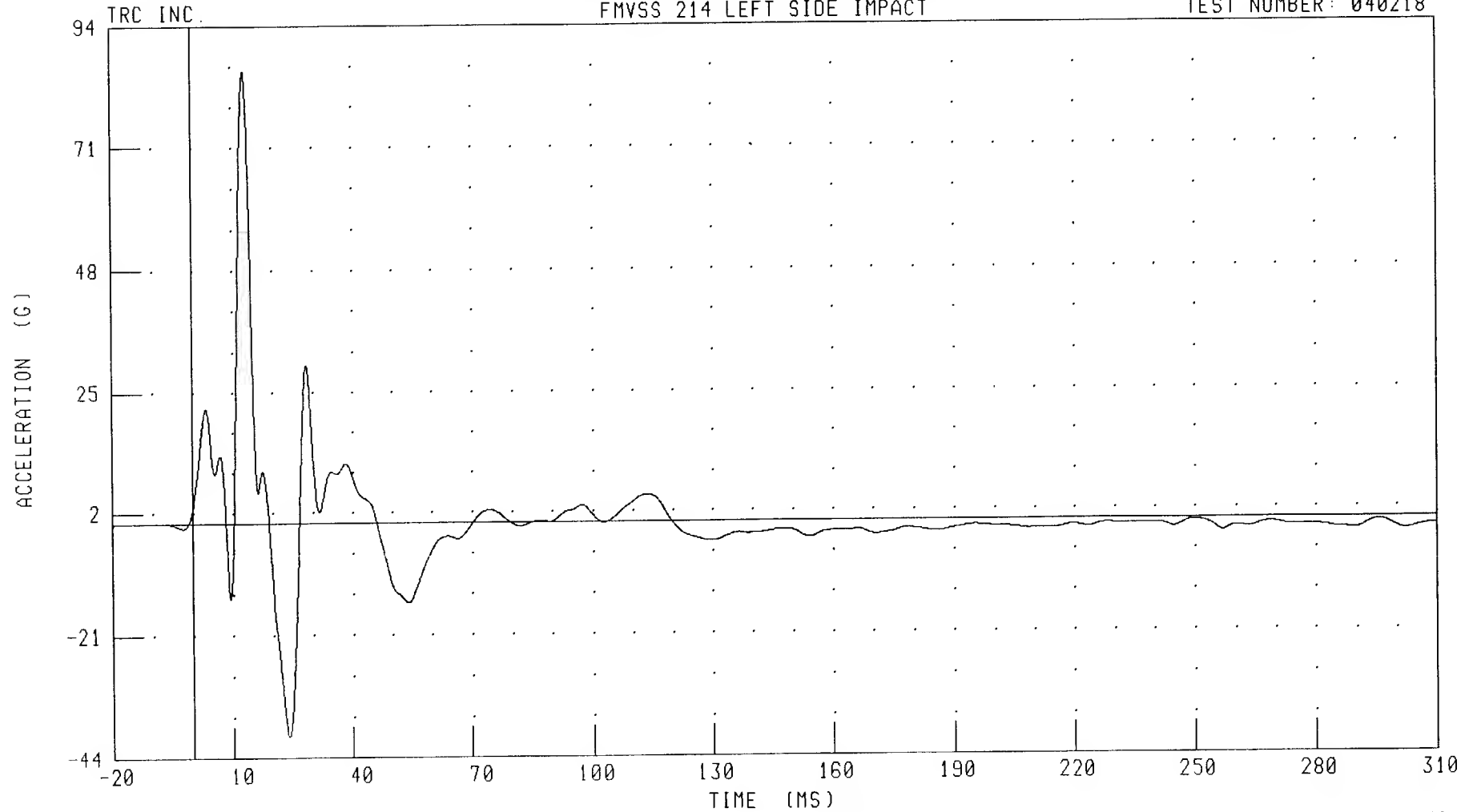
B-114

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRSYG1 FILTER: CH. CLASS 60

PEAK DATA: 85.52 G @ 13.12 MS; -40.03 G @ 23.84 MS

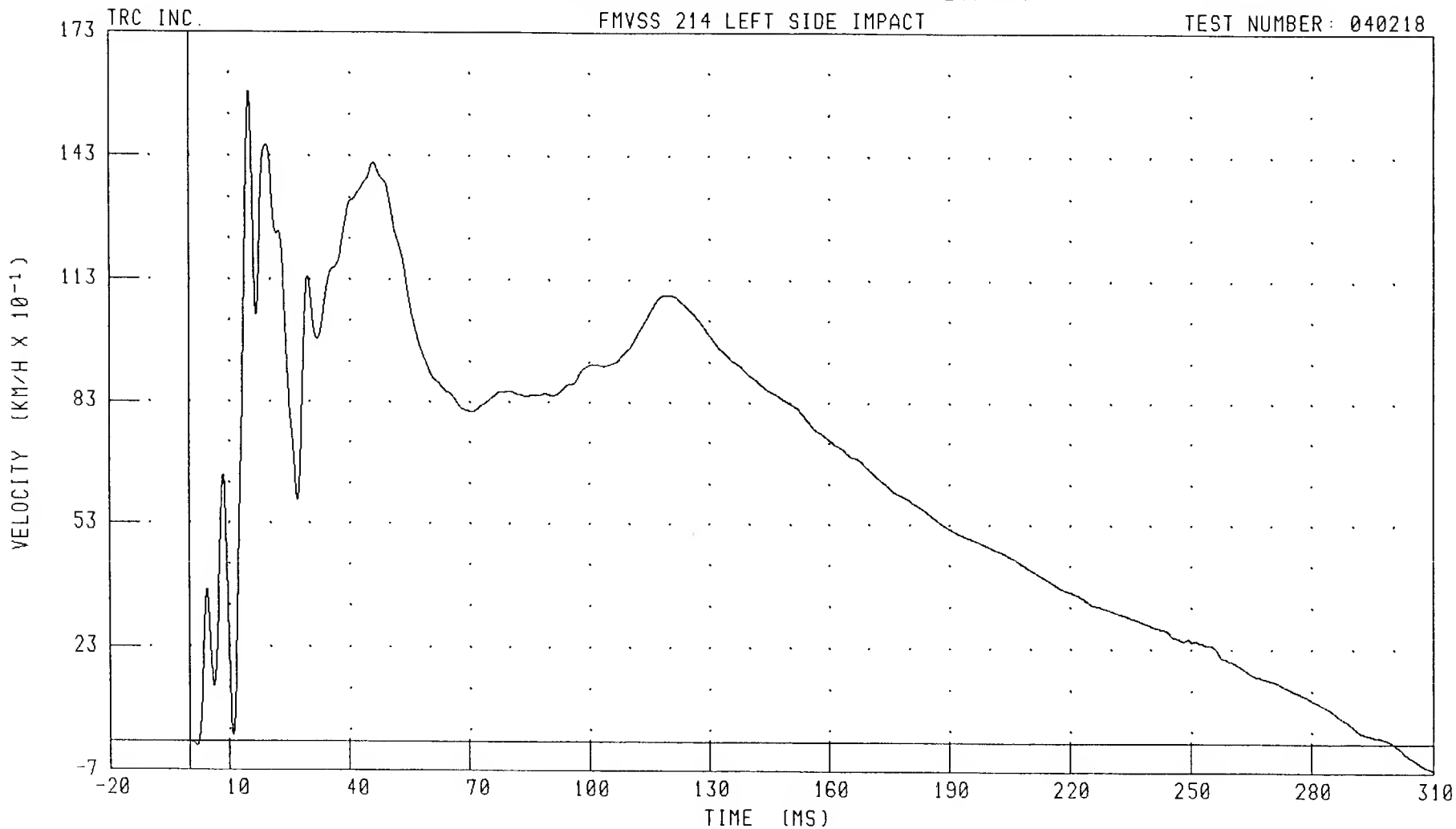
B-115

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRSYV1 FILTER: CH. CLASS 180

PEAK DATA: 15.85 KM/H @ 14.88 MS; -0.65 KM/H @ 310.00 MS

B-116

040218

TEST NUMBER: 040218



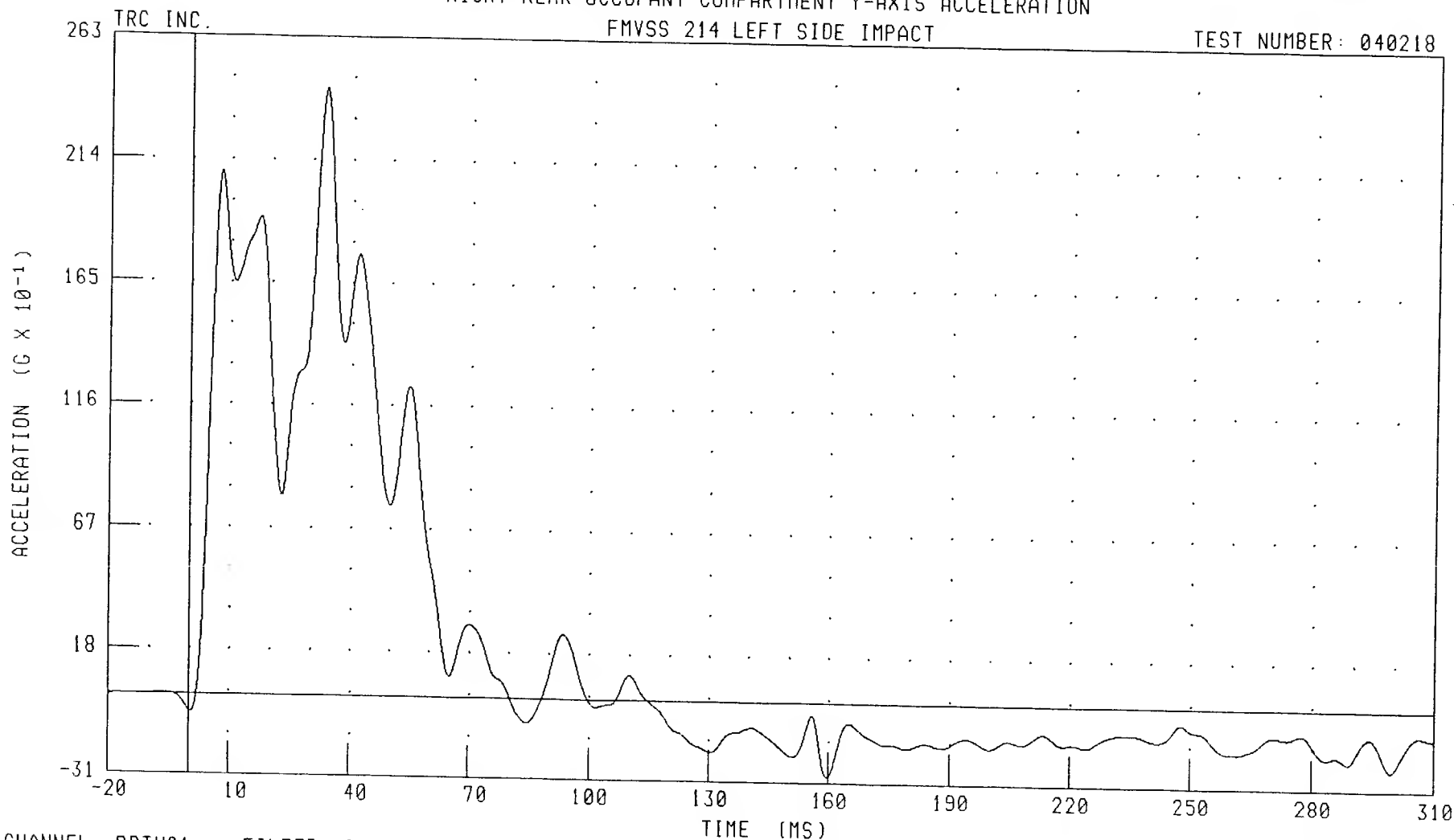
PEAK DATA: 544.11 MM @ 300.16 MS; -0.03 MM @ 2.48 MS

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



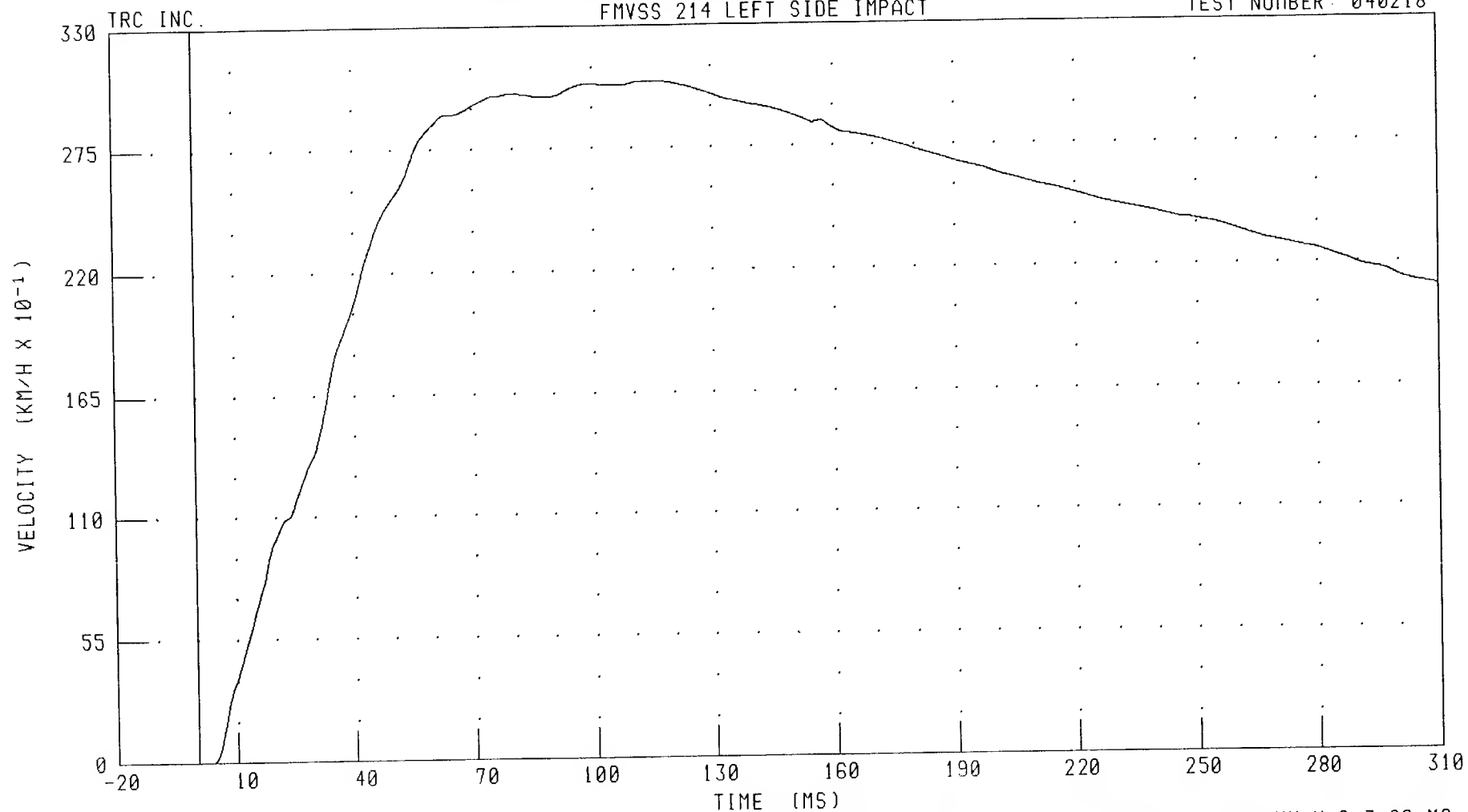
B-118

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



PEAK DATA: 30.50 KM/H @ 114.80 MS; -0.01 KM/H @ 3.28 MS

CHANNEL: RRTYV1 FILTER: CH CLASS 180

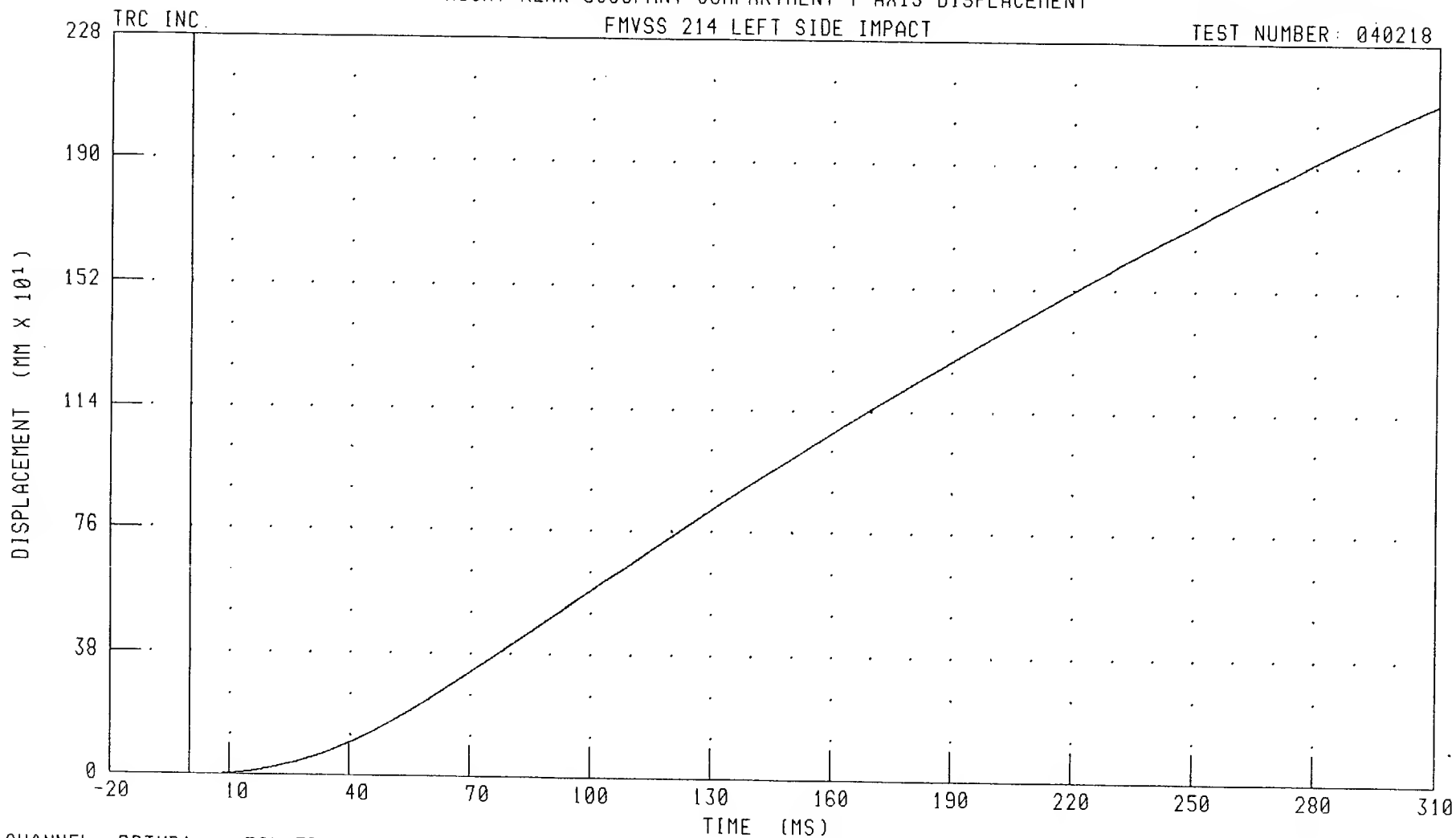
B-119

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: RRTYD1

FILTER: CH. CLASS 180

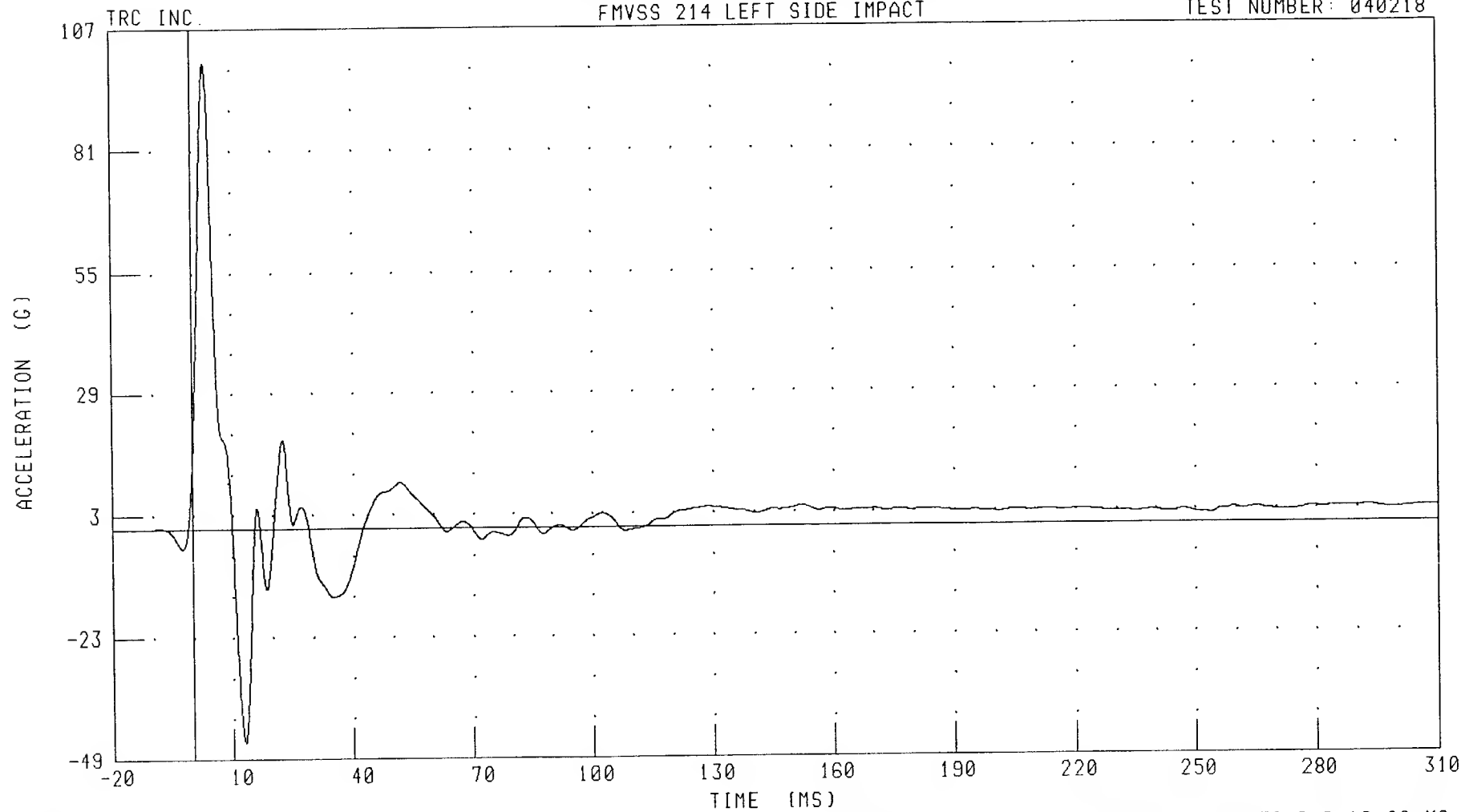
PEAK DATA: 2094.30 MM @ 310.00 MS; 0.00 MM @ 3.76 MS

B-120

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT LOWER A-POST Y-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLAYC1 FILTER: CH. CLASS 60

PEAK DATA: 99.79 G @ 3.36 MS; -45.39 G @ 12.96 MS

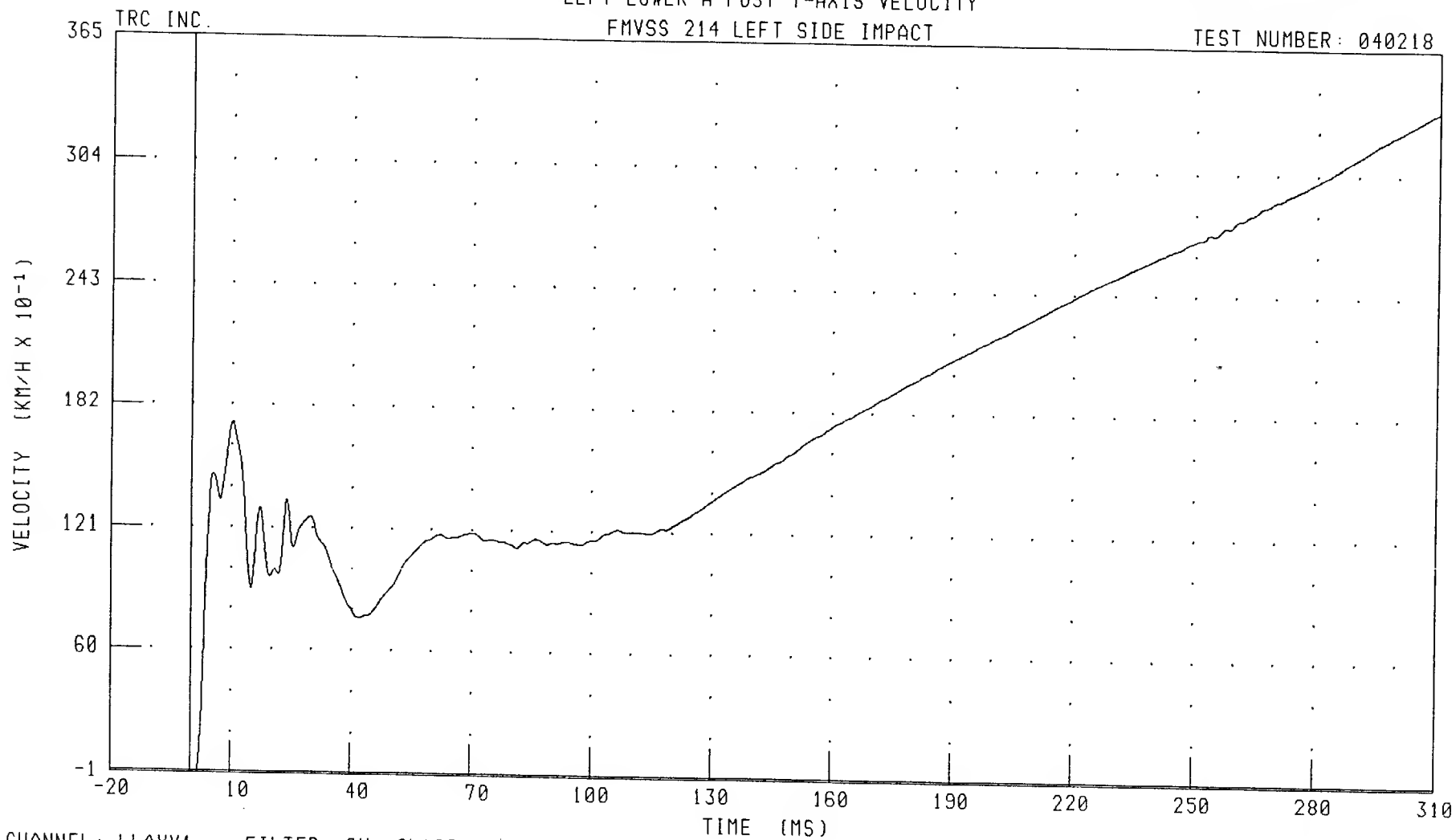
B-121

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT LOWER A-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



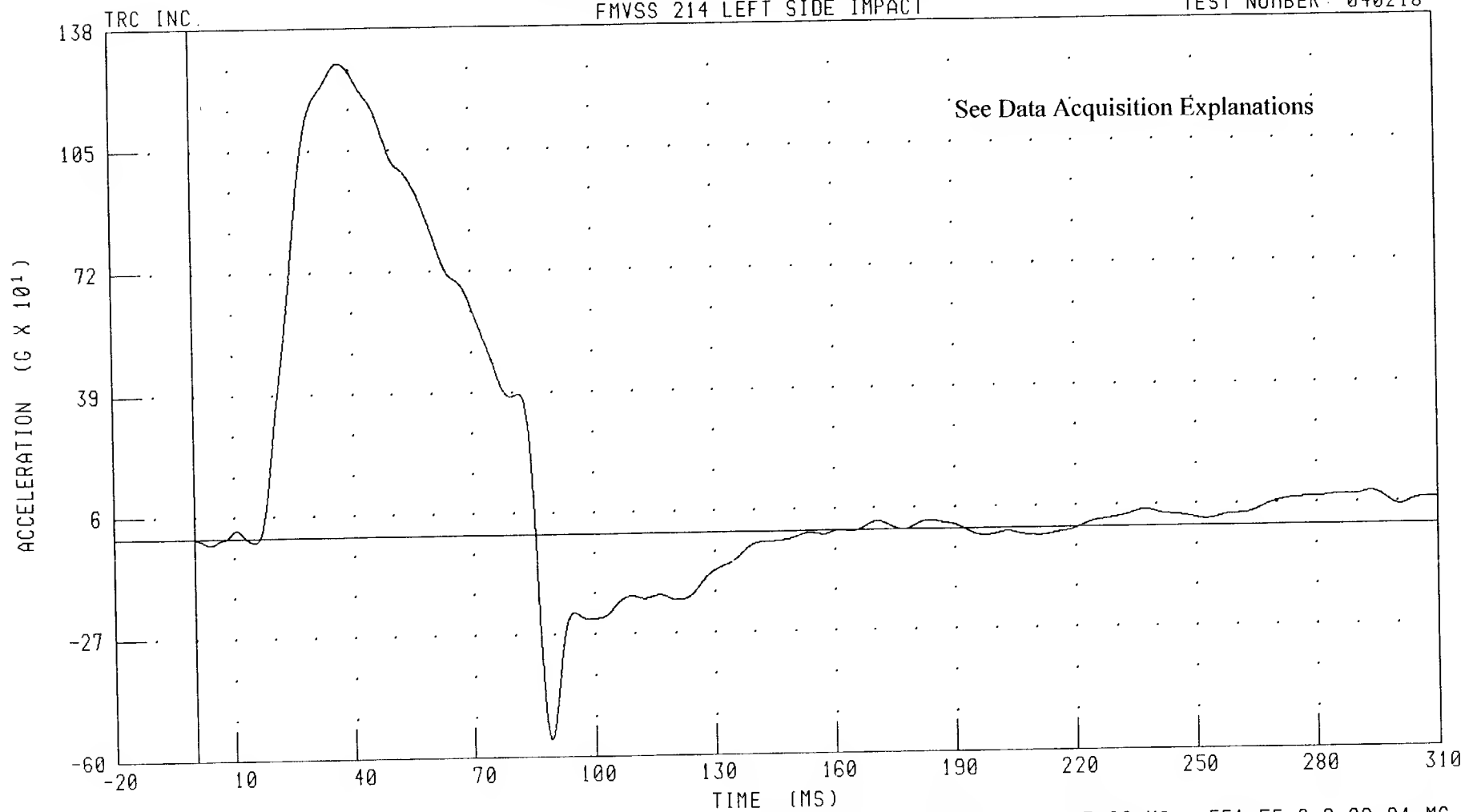
B-122

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT MIDDLE A-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



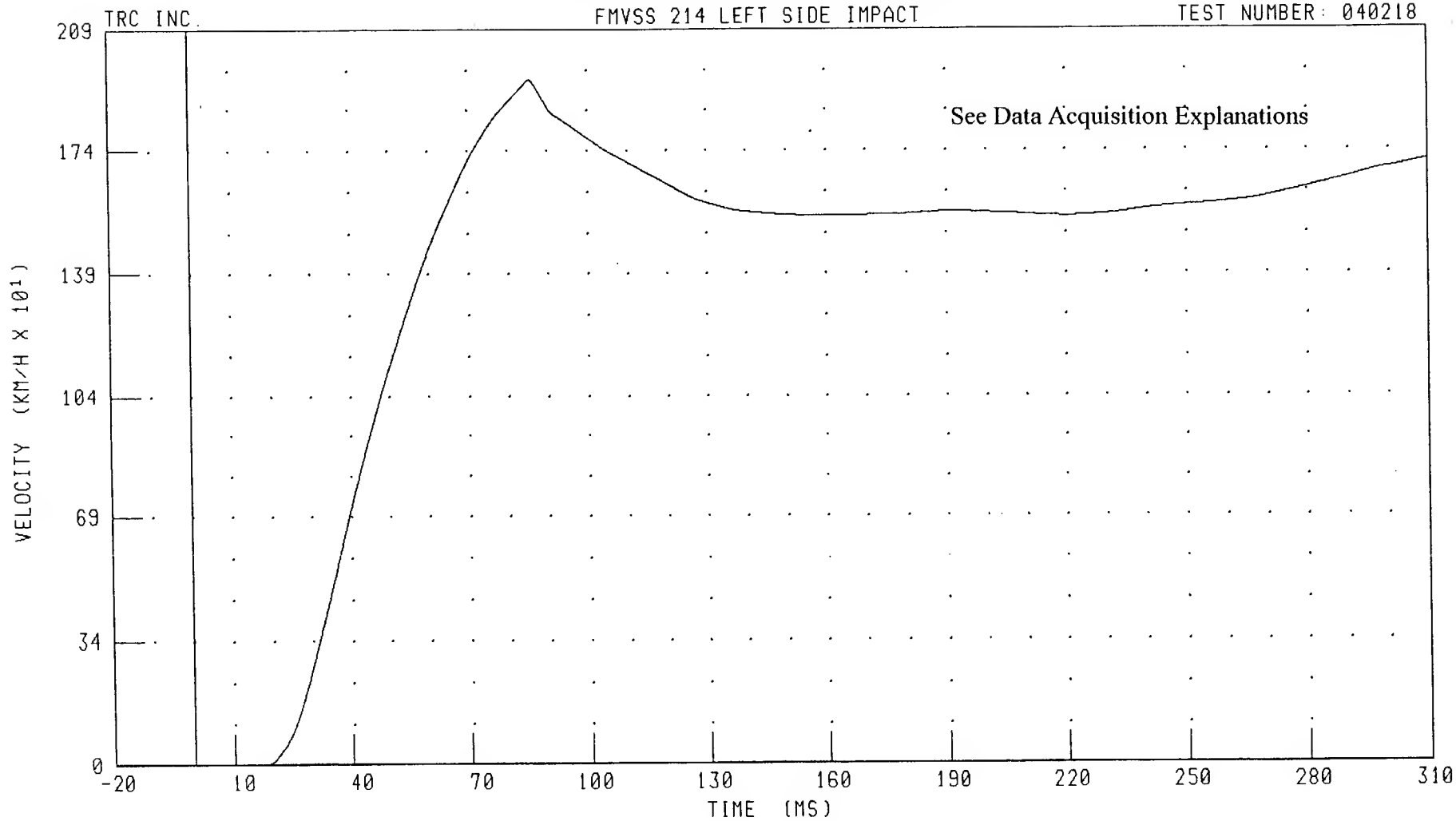
CHANNEL: LMAYC1 FILTER: CH. CLASS 60

PEAK DATA: 1286.74 G @ 37.60 MS; -551.55 G @ 89.04 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT MIDDLE A-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LMAYV1 FILTER: CH. CLASS 180

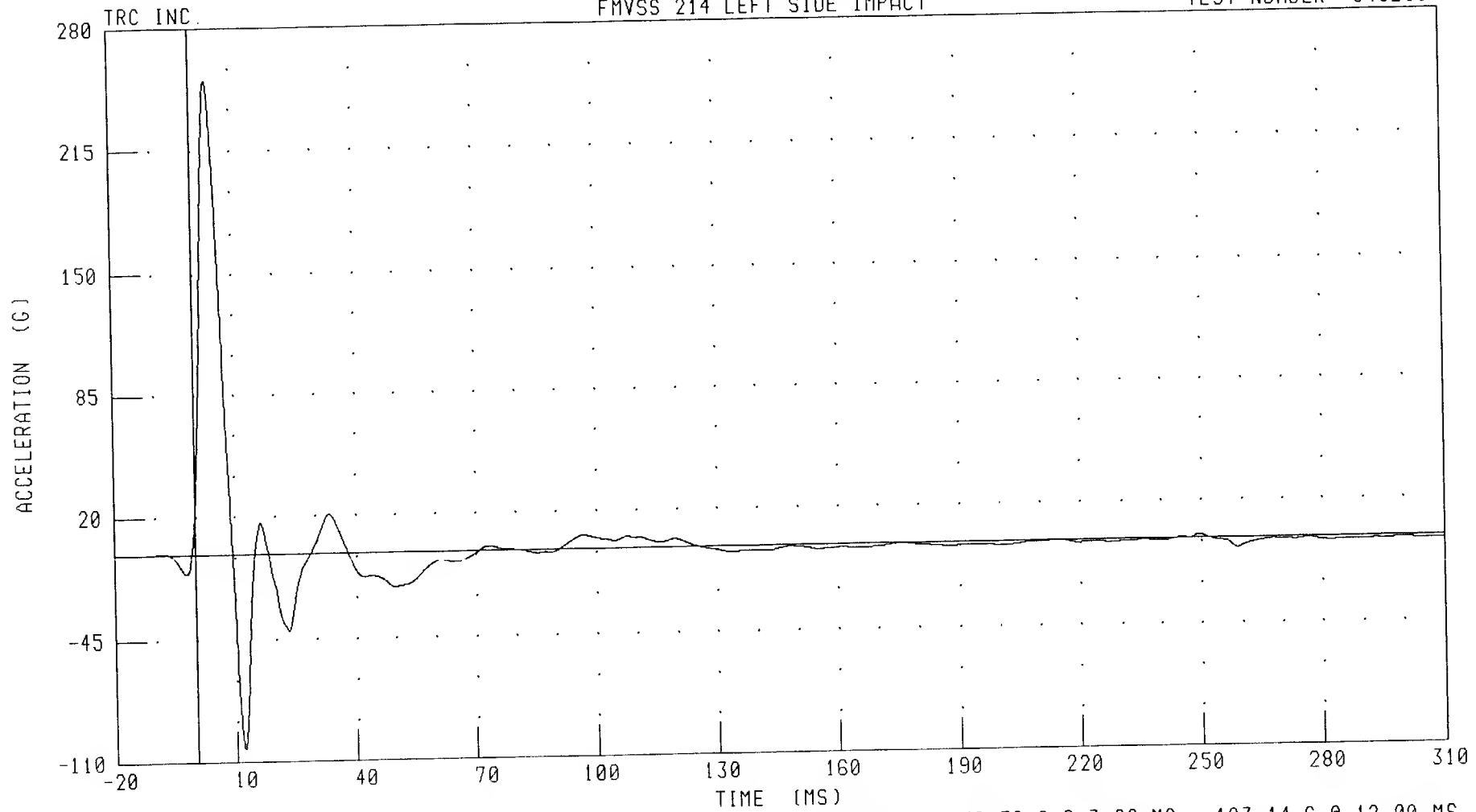
PEAK DATA: 1951.69 KM/H @ 85.84 MS; -3.35 KM/H @ 9.36 MS

B-124

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT LOWER B-POST Y-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLBYG1 FILTER: CH. CLASS 60

PEAK DATA: 252.30 G @ 3.92 MS; -103.14 G @ 12.00 MS

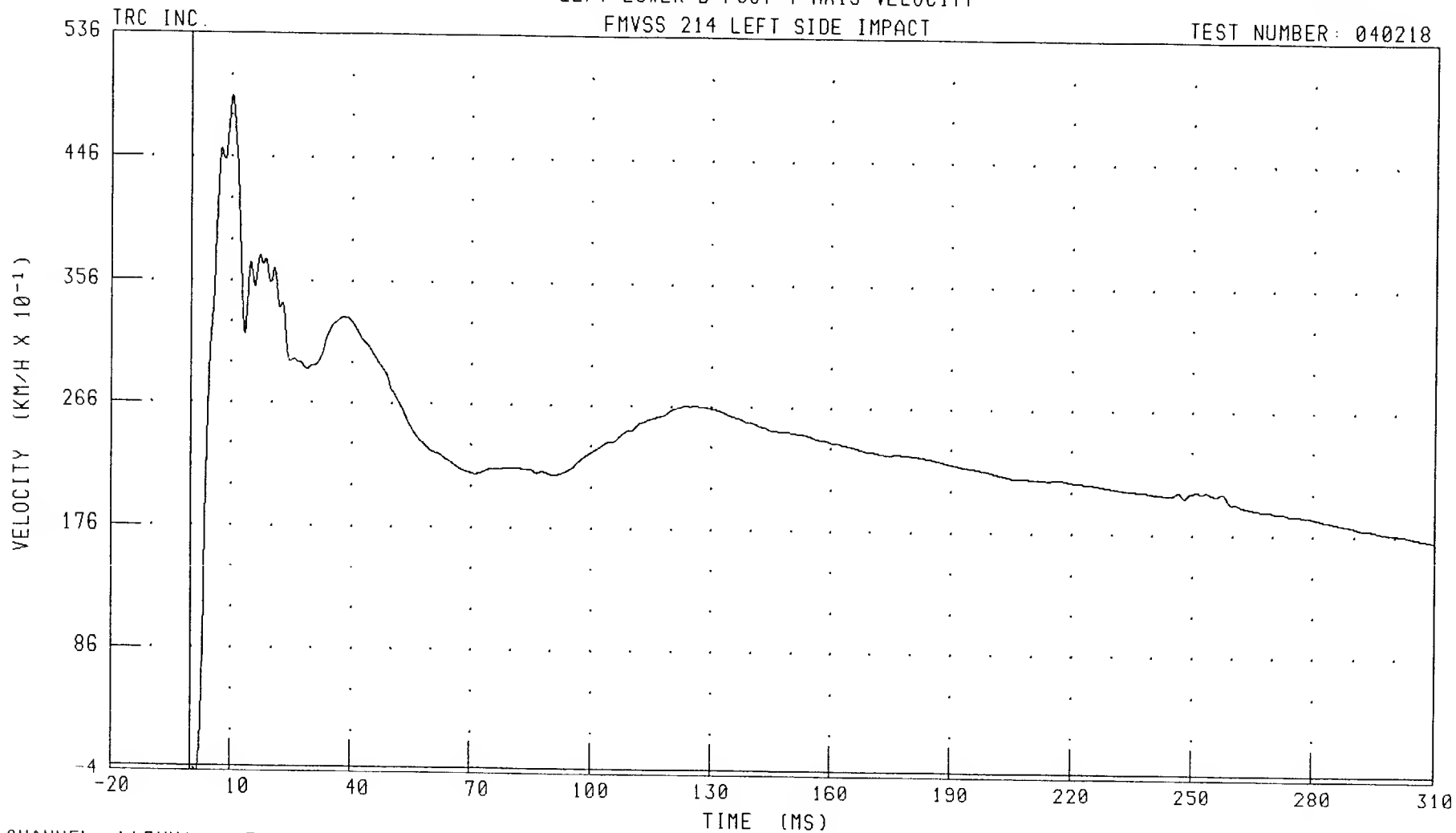
B-125

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT LOWER B-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



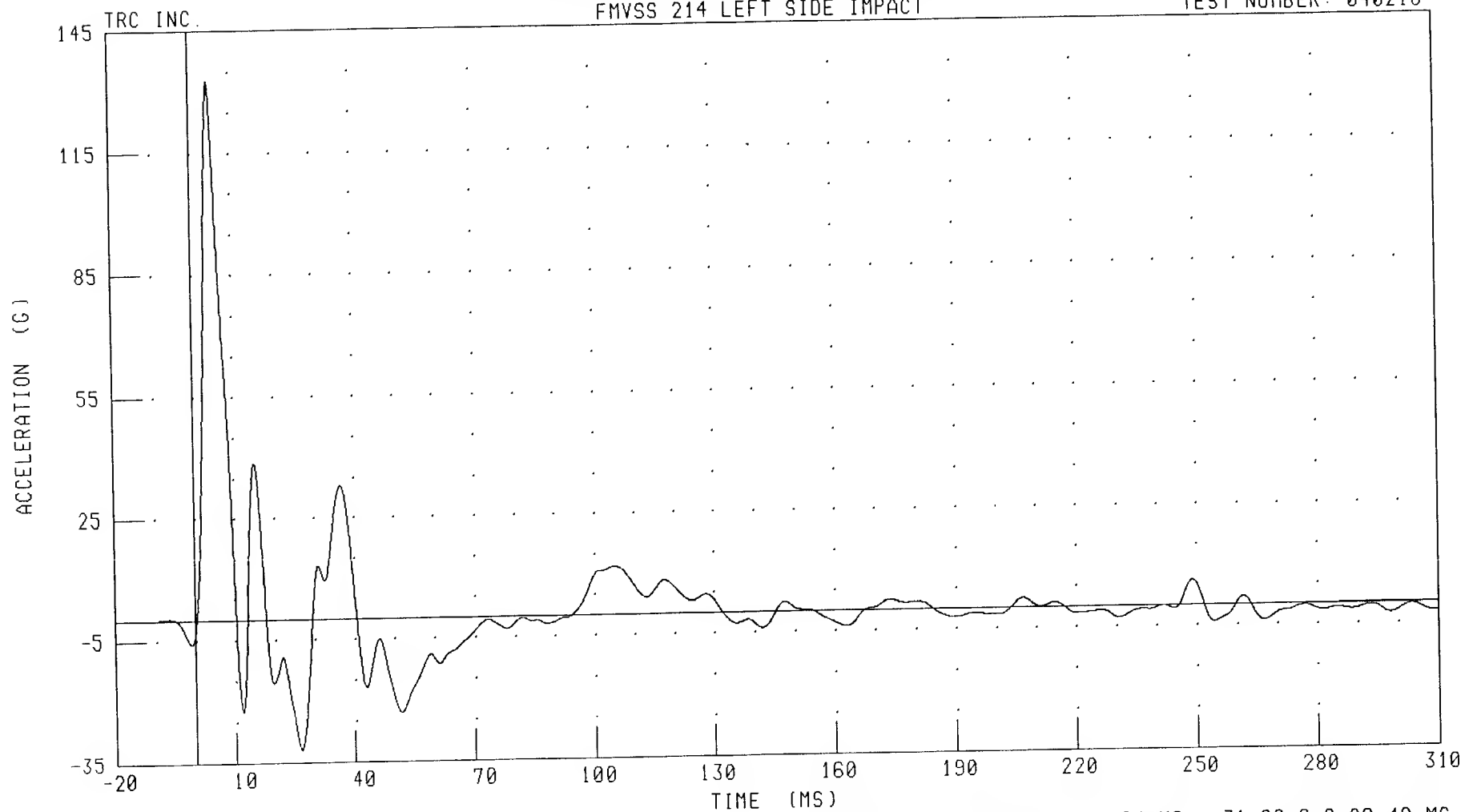
B-126

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT MIDDLE B-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LM BYG1 FILTER: CH. CLASS 60

PEAK DATA: 132.87 G @ 4.64 MS; -31.92 G @ 26.48 MS

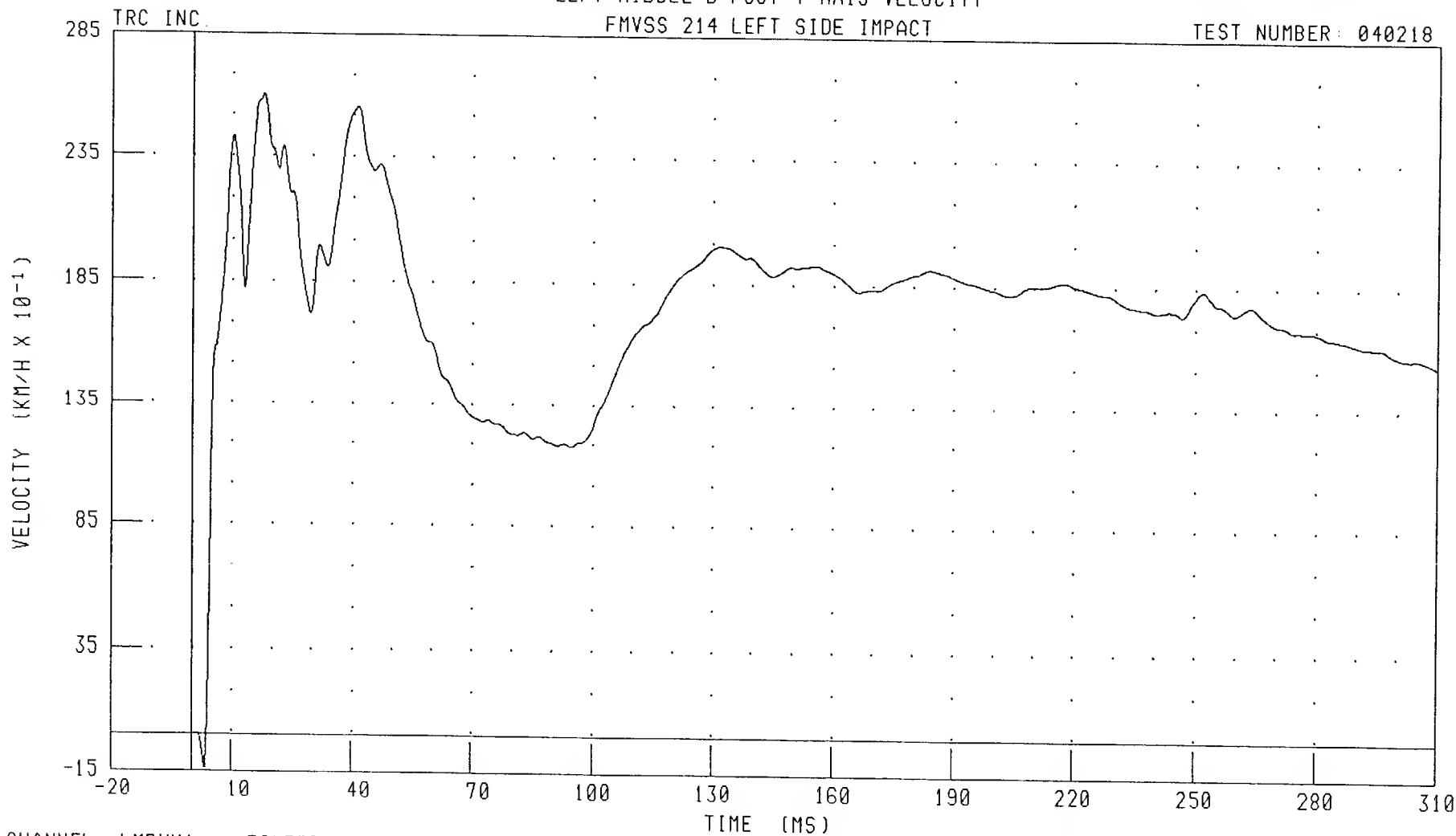
B-127

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT MIDDLE B-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LMBYV1

FILTER: CH. CLASS 180

PEAK DATA: 26.03 KM/H @ 17.76 MS, -1.37 KM/H @ 3.12 MS

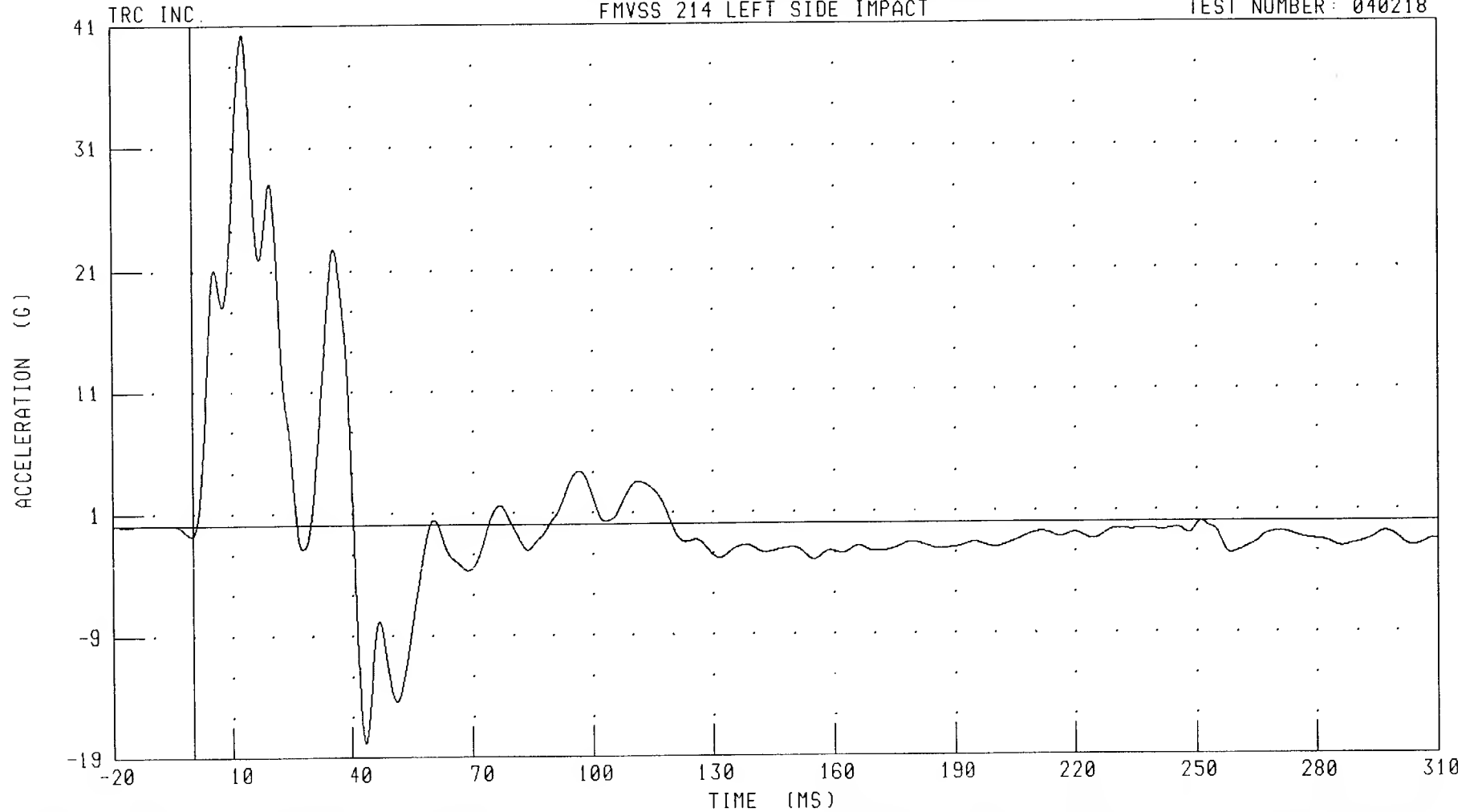
B-128

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT FRONT SEAT TRACK Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LFTYG1 FILTER: CH CLASS 60

PEAK DATA: 40.25 G @ 12.96 MS; -17.84 G @ 43.36 MS

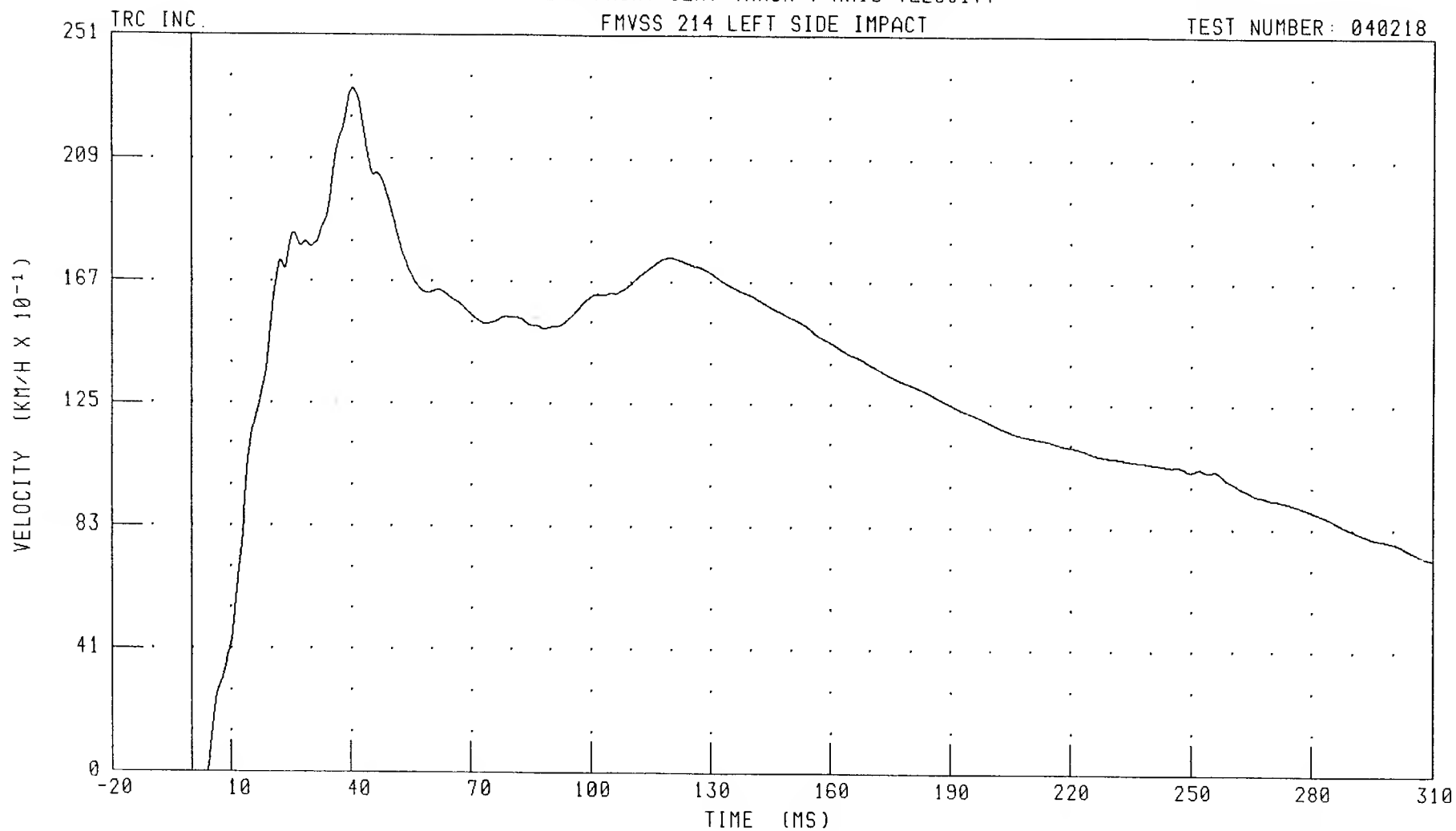
B-129

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT FRONT SEAT TRACK Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LFTYV1

FILTER: CH. CLASS 180

PEAK DATA: 23.35 KM/H @ 40.40 MS; -0.05 KM/H @ 3.44 MS

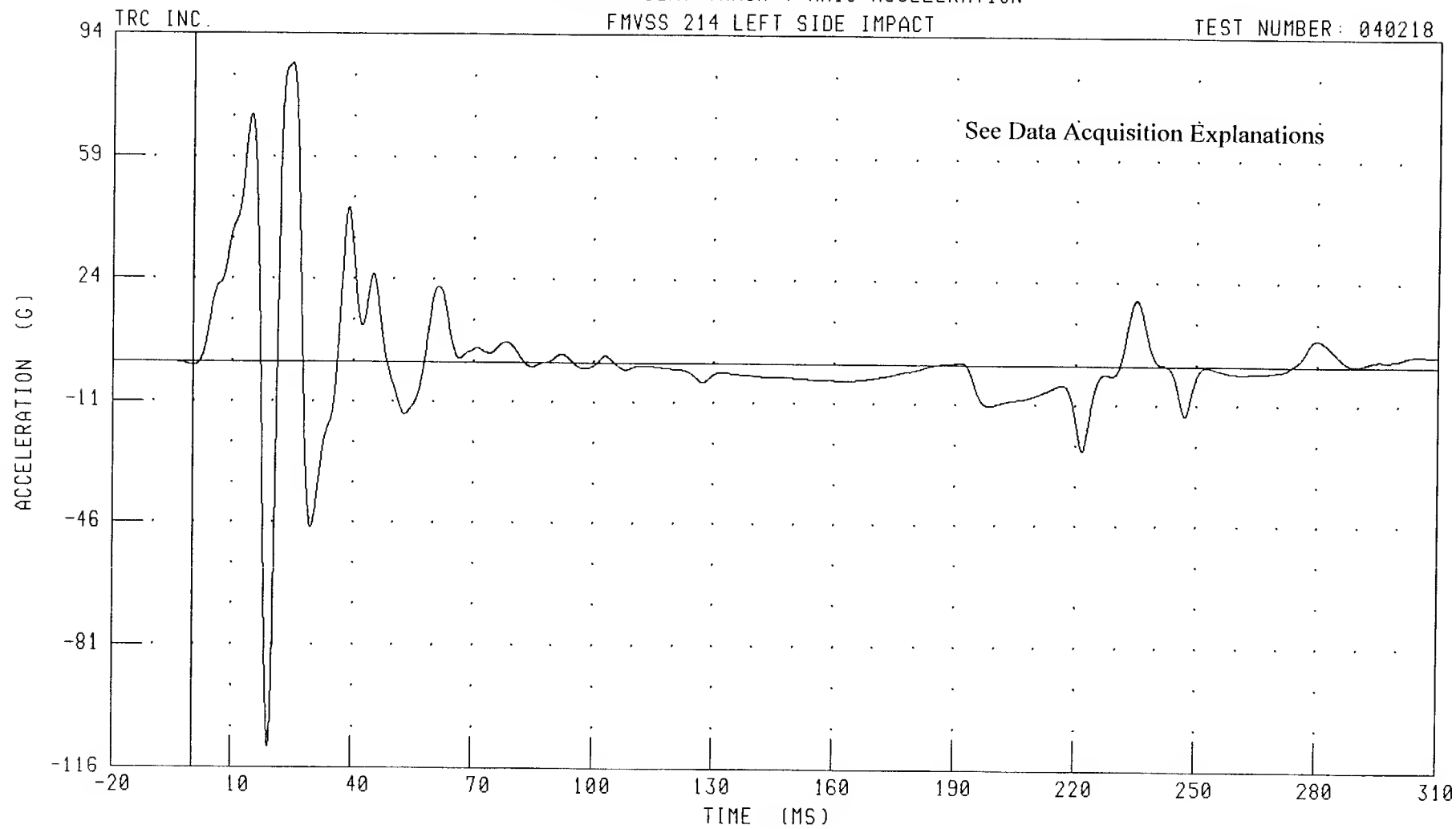
B-130

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR SEAT TRACK Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRTYG1 FILTER: CH. CLASS 60

PEAK DATA: 85.70 G @ 24.72 MS; -110.10 G @ 19.28 MS

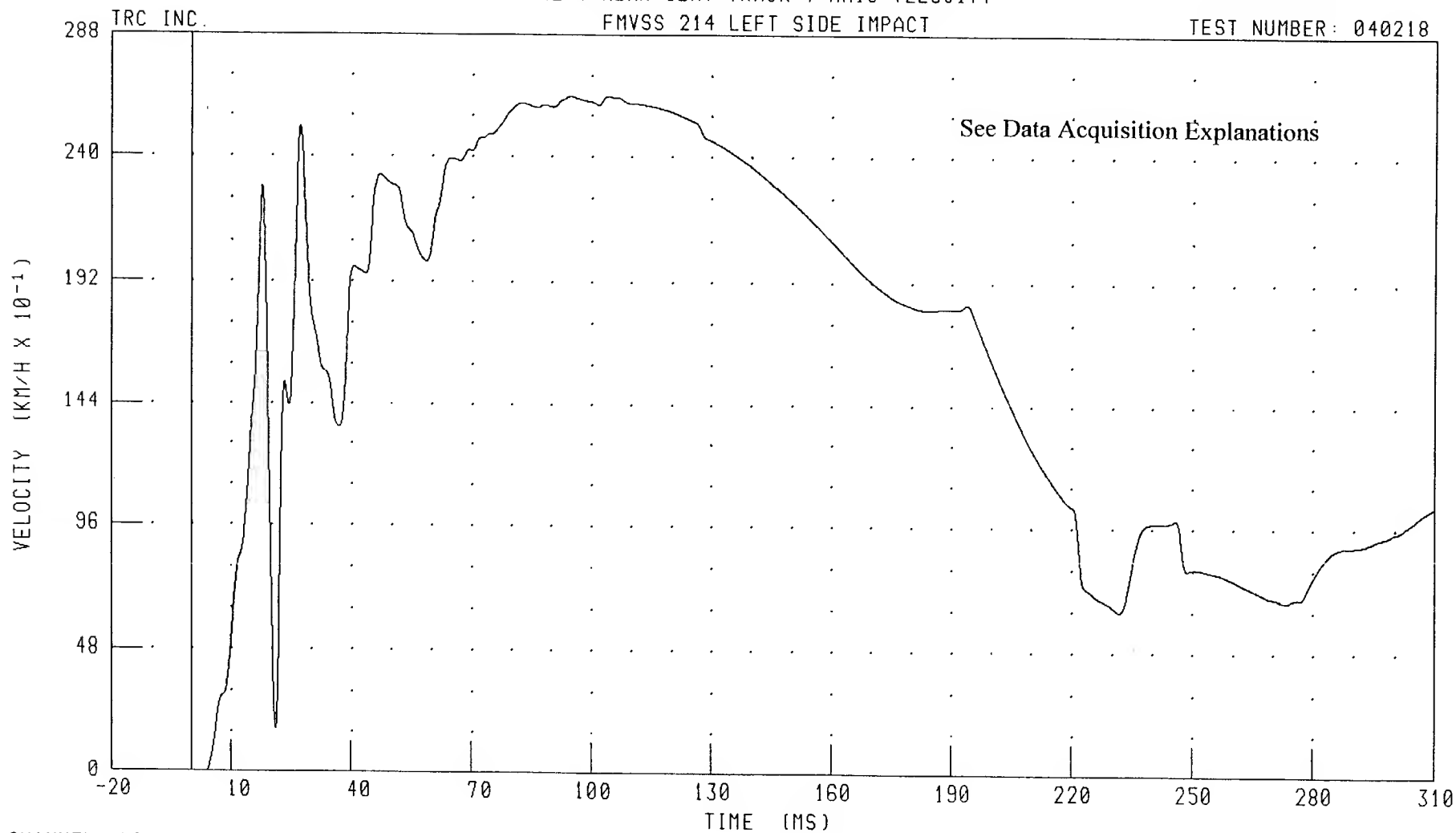
B-131

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR SEAT TRACK Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRTYV1

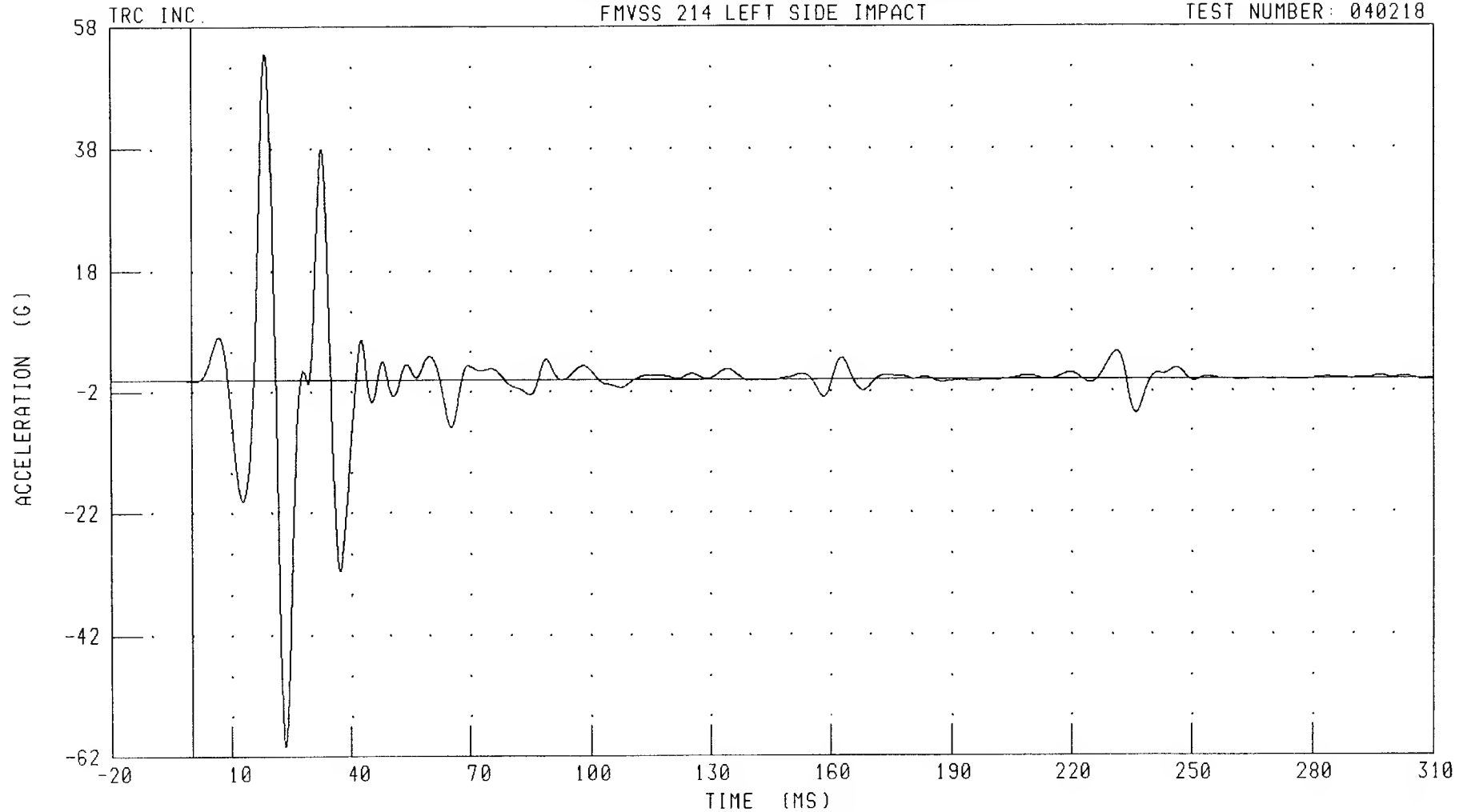
FILTER: CH. CLASS 180

PEAK DATA: 26.37 KM/H @ 104.08 MS; -0.09 KM/H @ 3.44 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCCXC1 FILTER: CH. CLASS 60

PEAK DATA: 53.55 G @ 18.56 MS; -60.37 G @ 23.52 MS

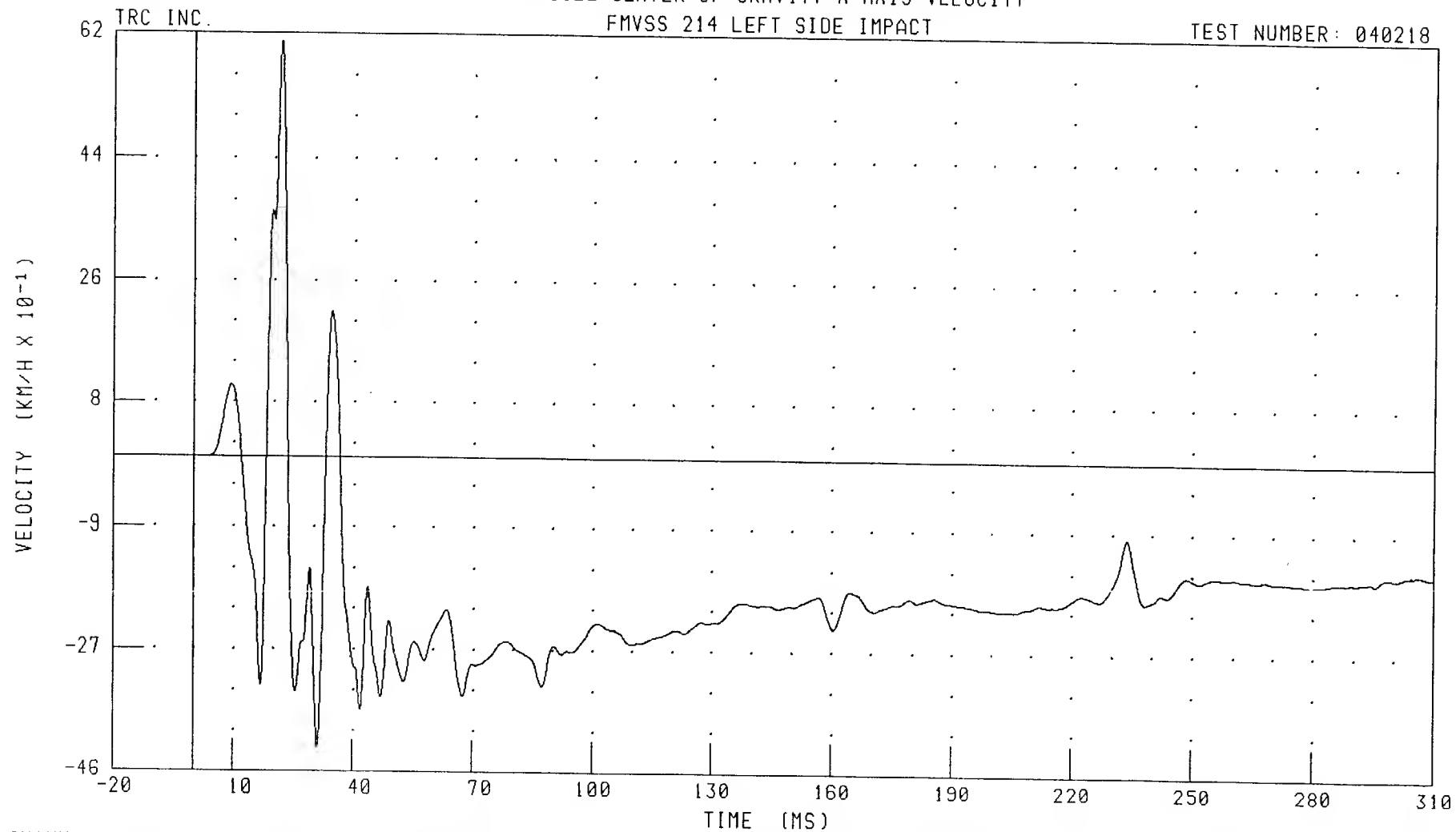
B-133

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCGXV1 FILTER: CH. CLASS 180

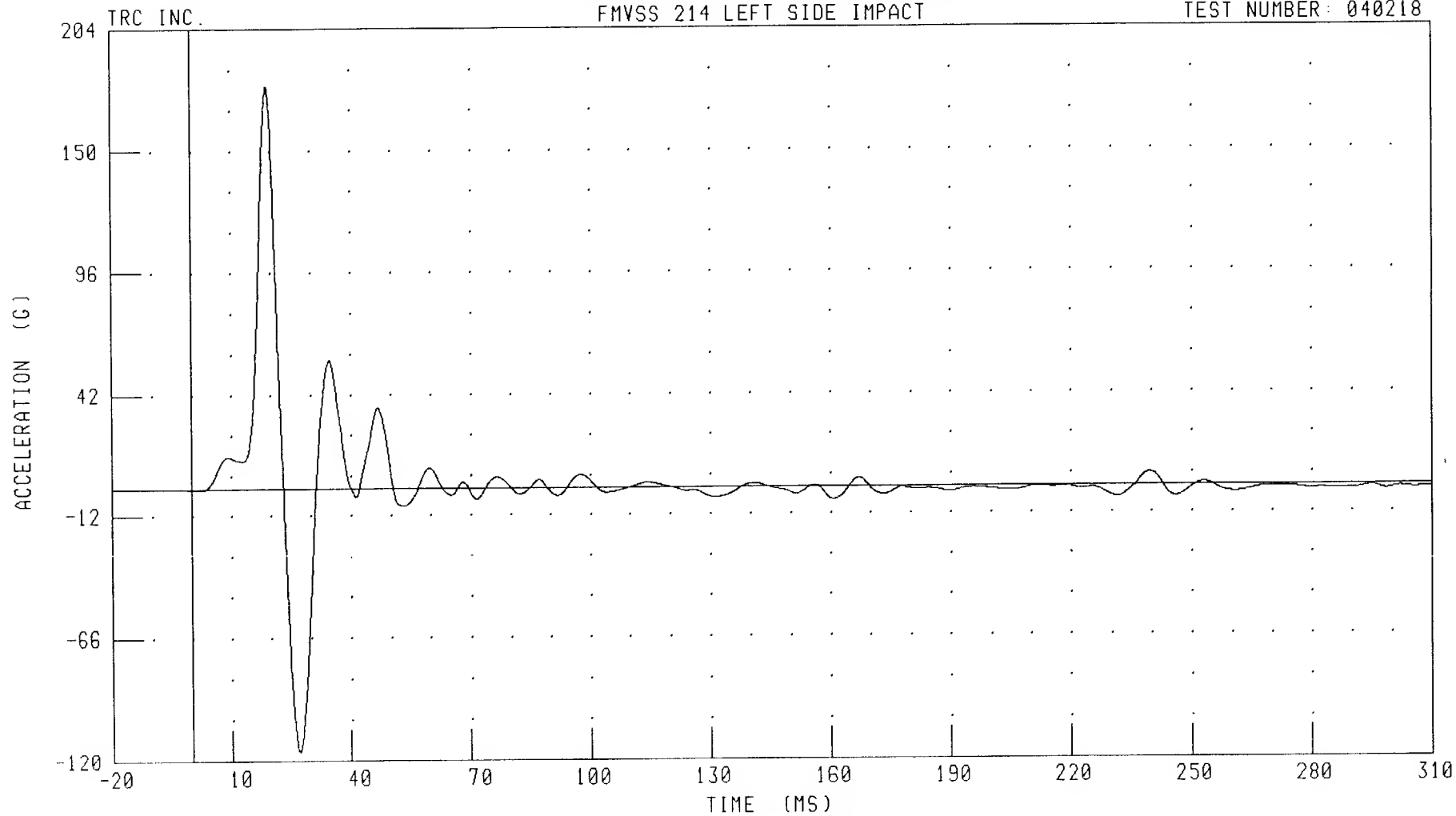
B-134

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCCYG1 FILTER: CH CLASS 60

PEAK DATA: 178.98 G @ 19.28 MS; -116.08 G @ 27.04 MS

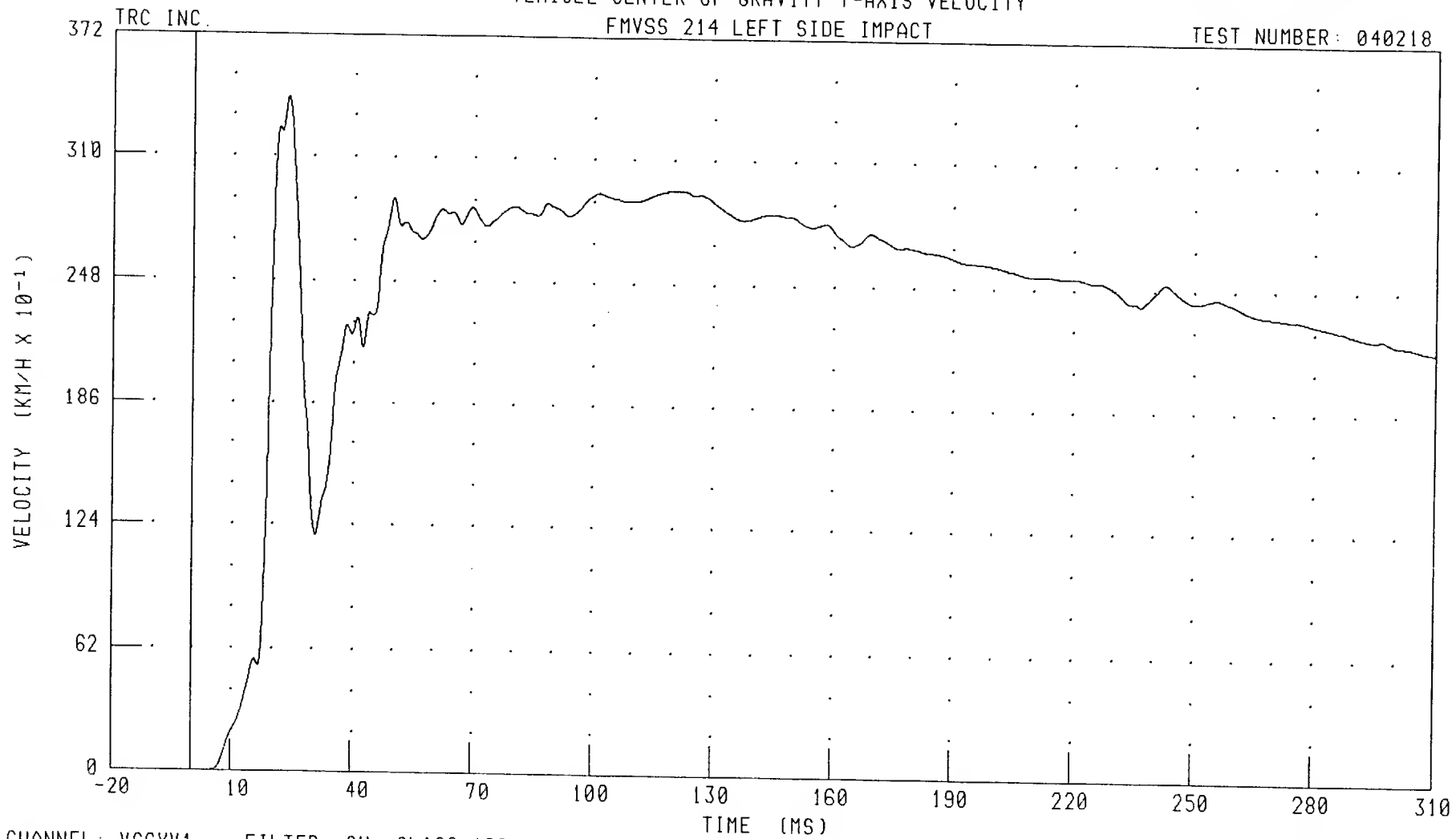
B-135

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



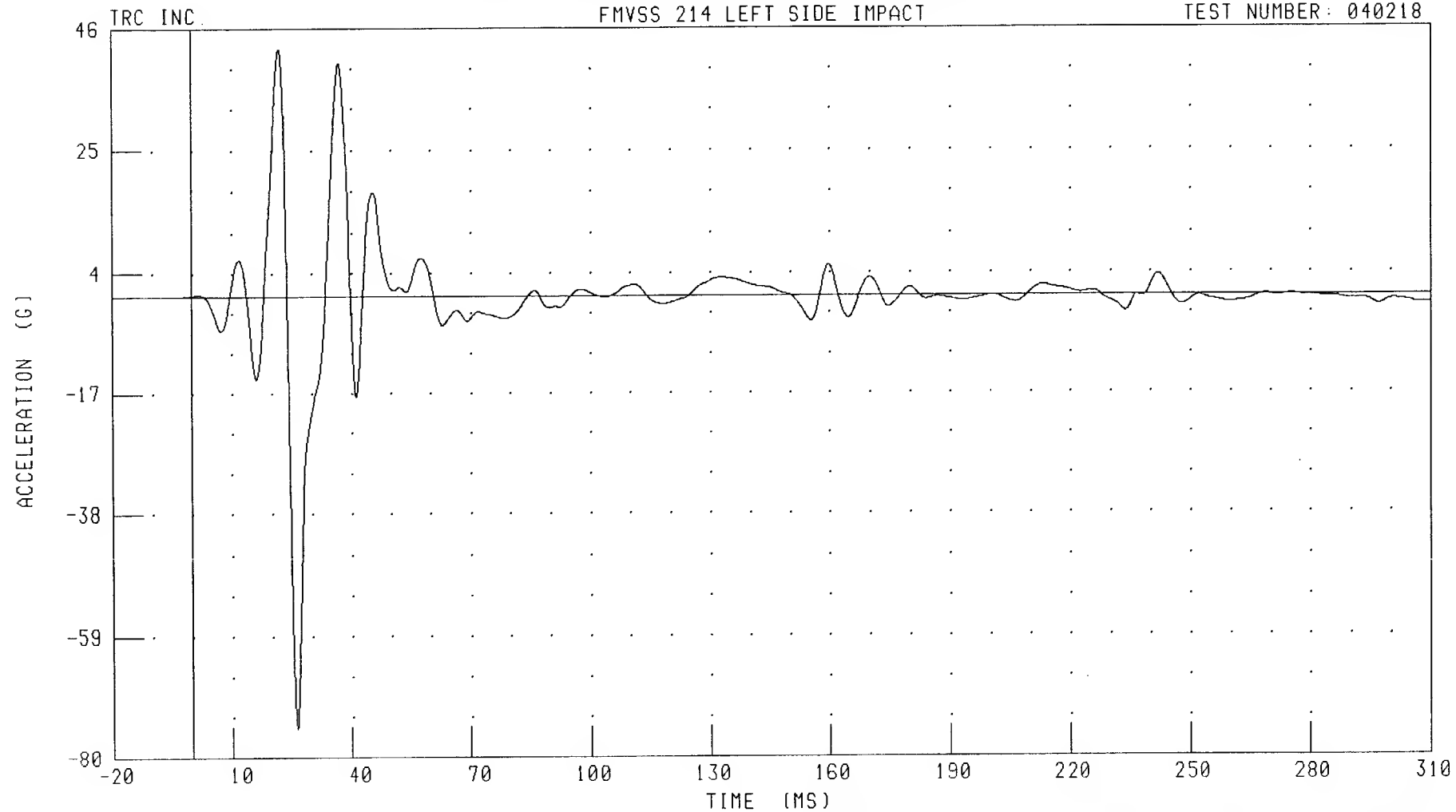
B-136

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCGZG1 FILTER: CH. CLASS 60

PEAK DATA: 42.53 G @ 22.00 MS; -75.08 G @ 26.24 MS

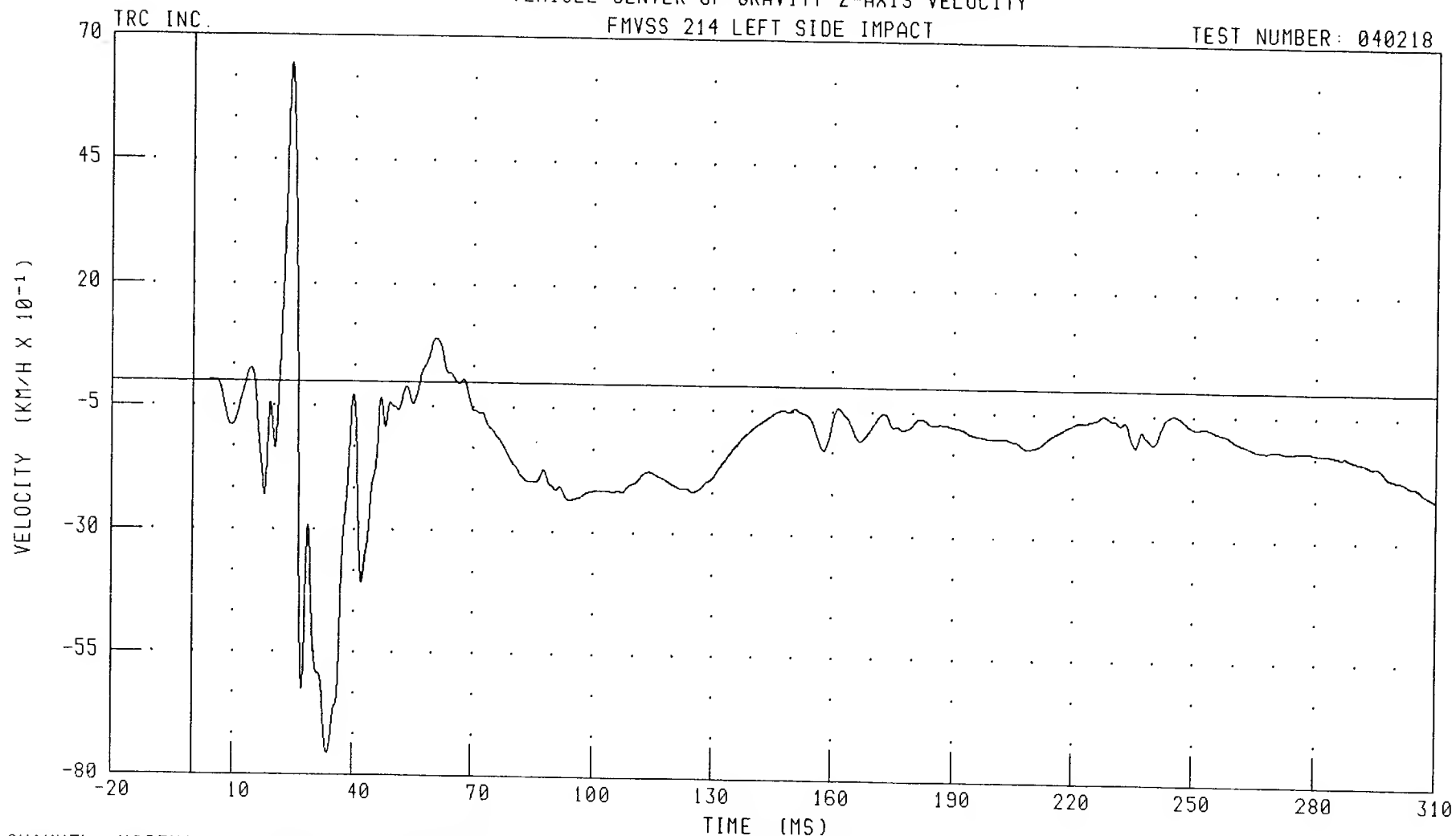
B-137

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCGZV1 FILTER: CH. CLASS 180

PEAK DATA: 6.43 KM/H @ 24.40 MS; -7.57 KM/H @ 33.60 MS

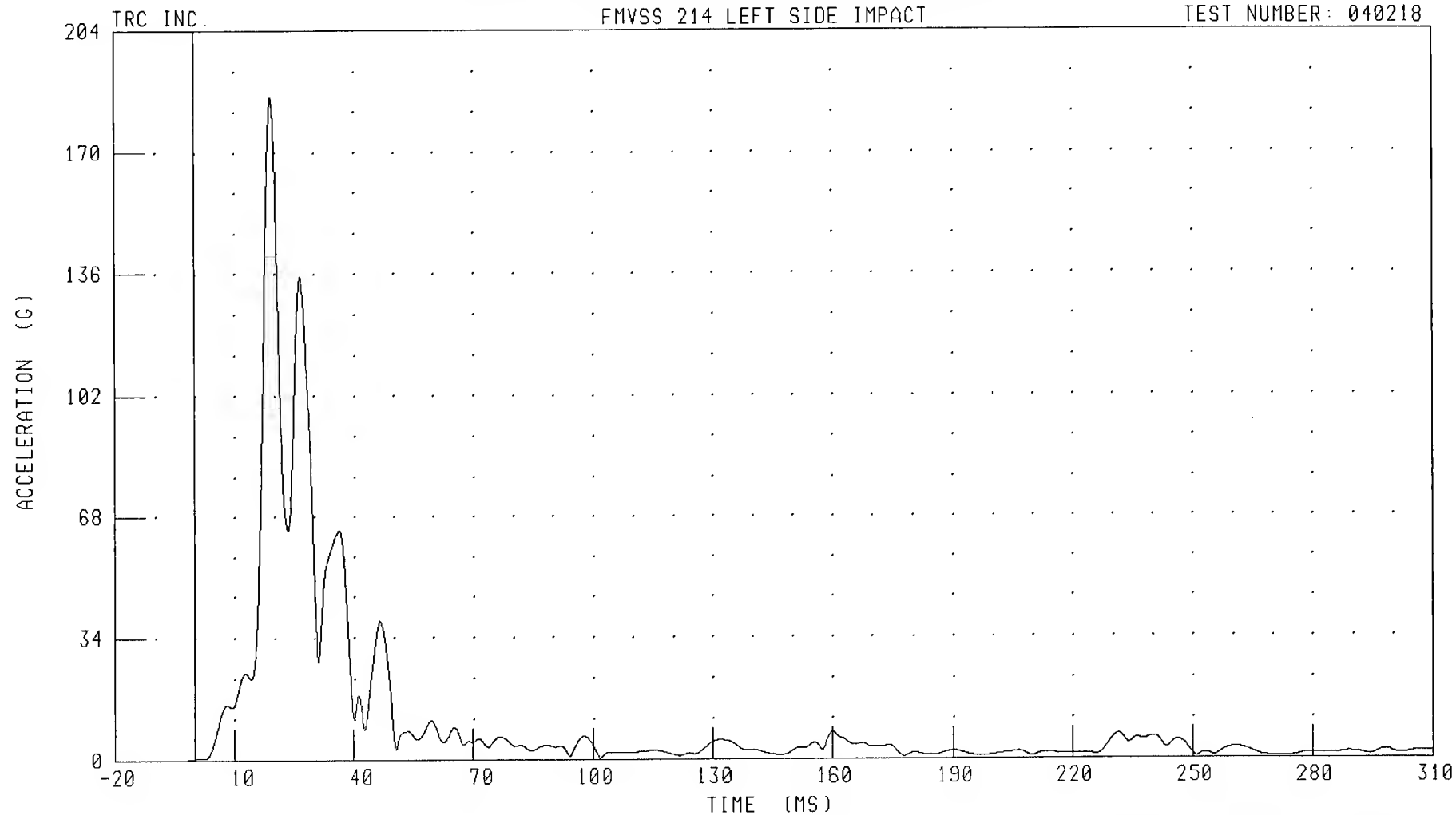
B-138

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: VCCRG1 FILTER: CH. CLASS 60

PEAK DATA: 185.65 G @ 19.20 MS; 0.00 G @ -17.84 MS

B-139

040218

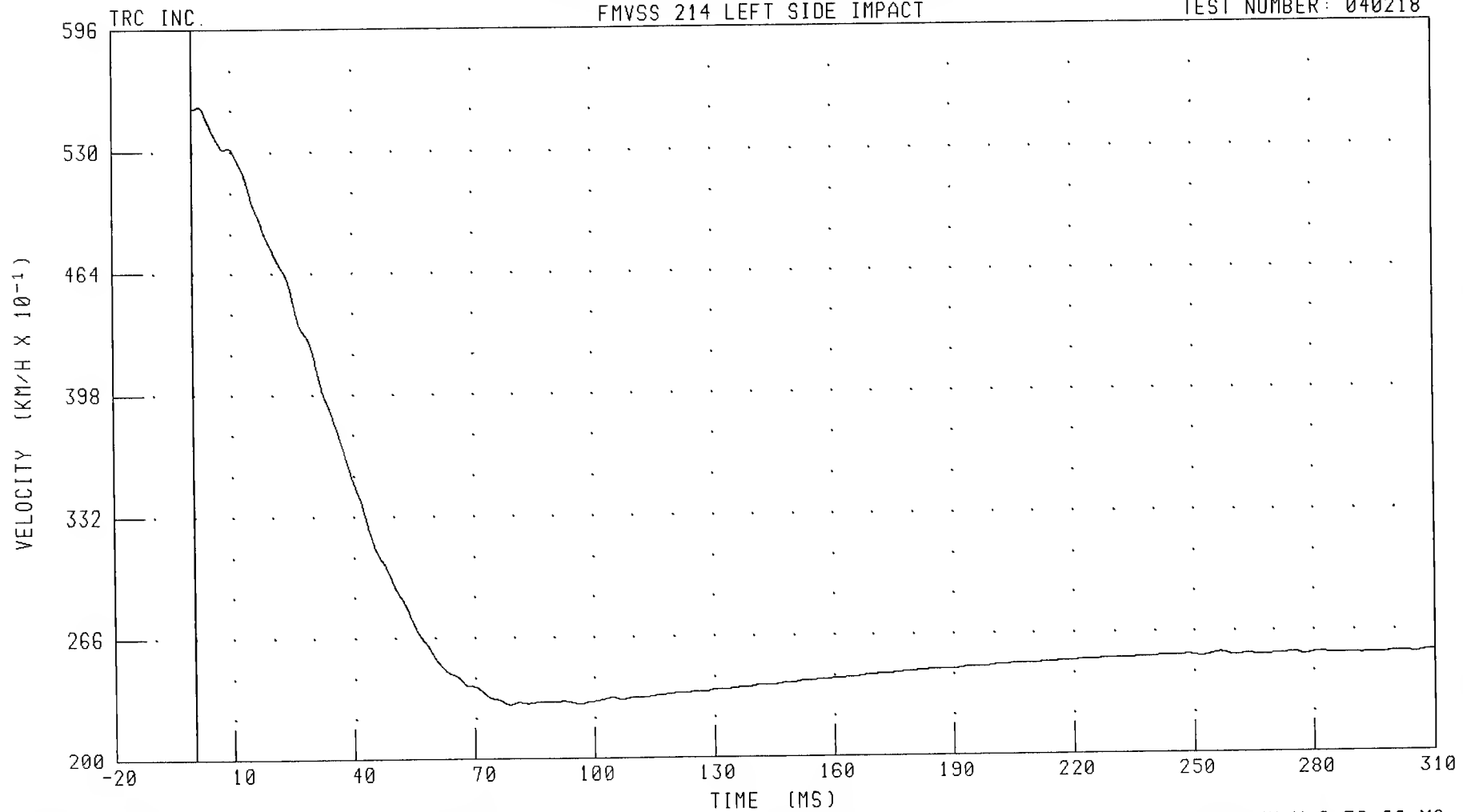
MDB Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB CENTER OF GRAVITY X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.41 KM/H @ 1.84 MS; 22.92 KM/H @ 78.88 MS

B-142

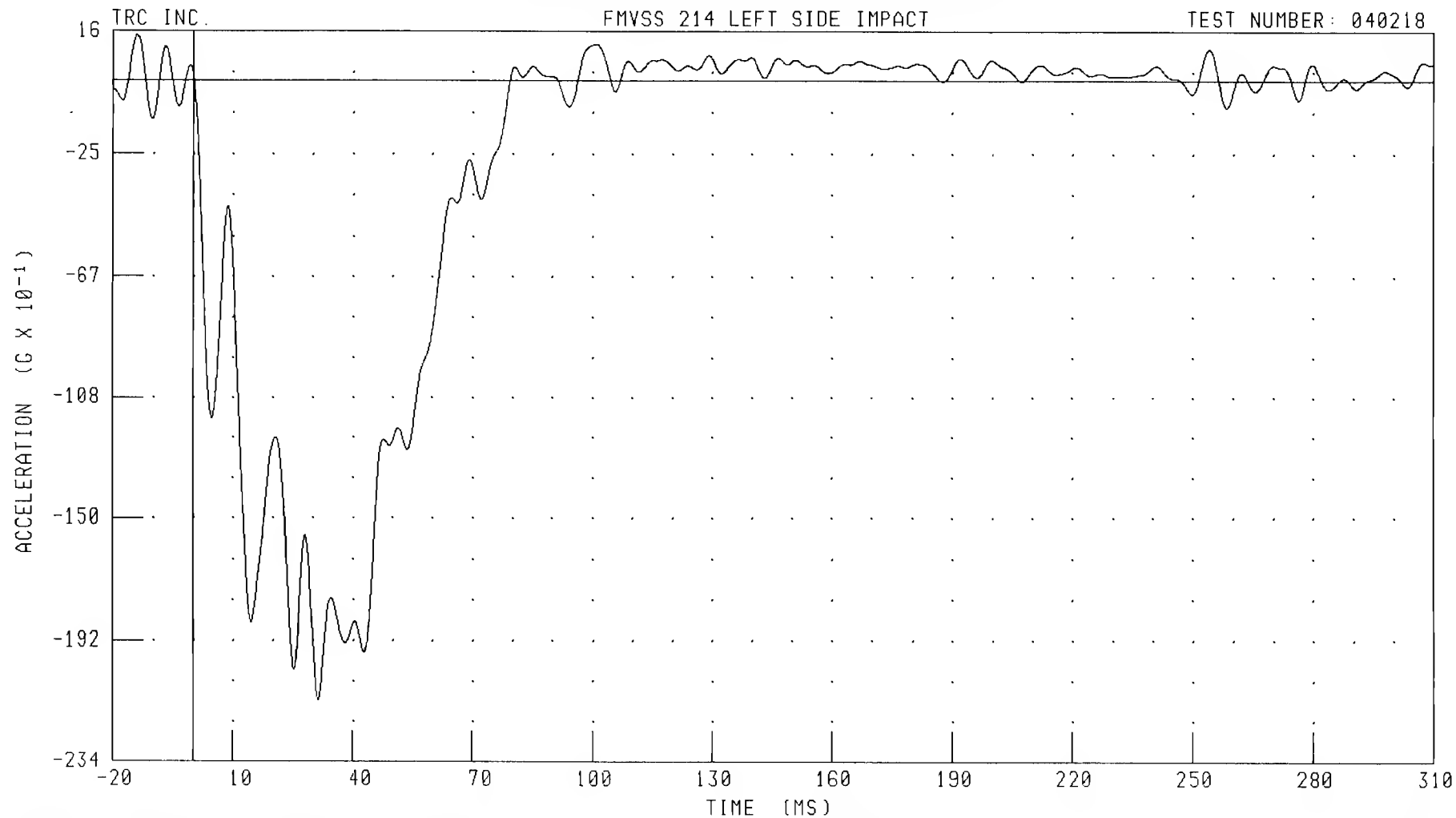
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB CENTER OF GRAVITY X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGXG1 FILTER: CH. CLASS 60

PEAK DATA: 1.56 G @ -14.00 MS; -21.36 G @ 31.44 MS

B-141

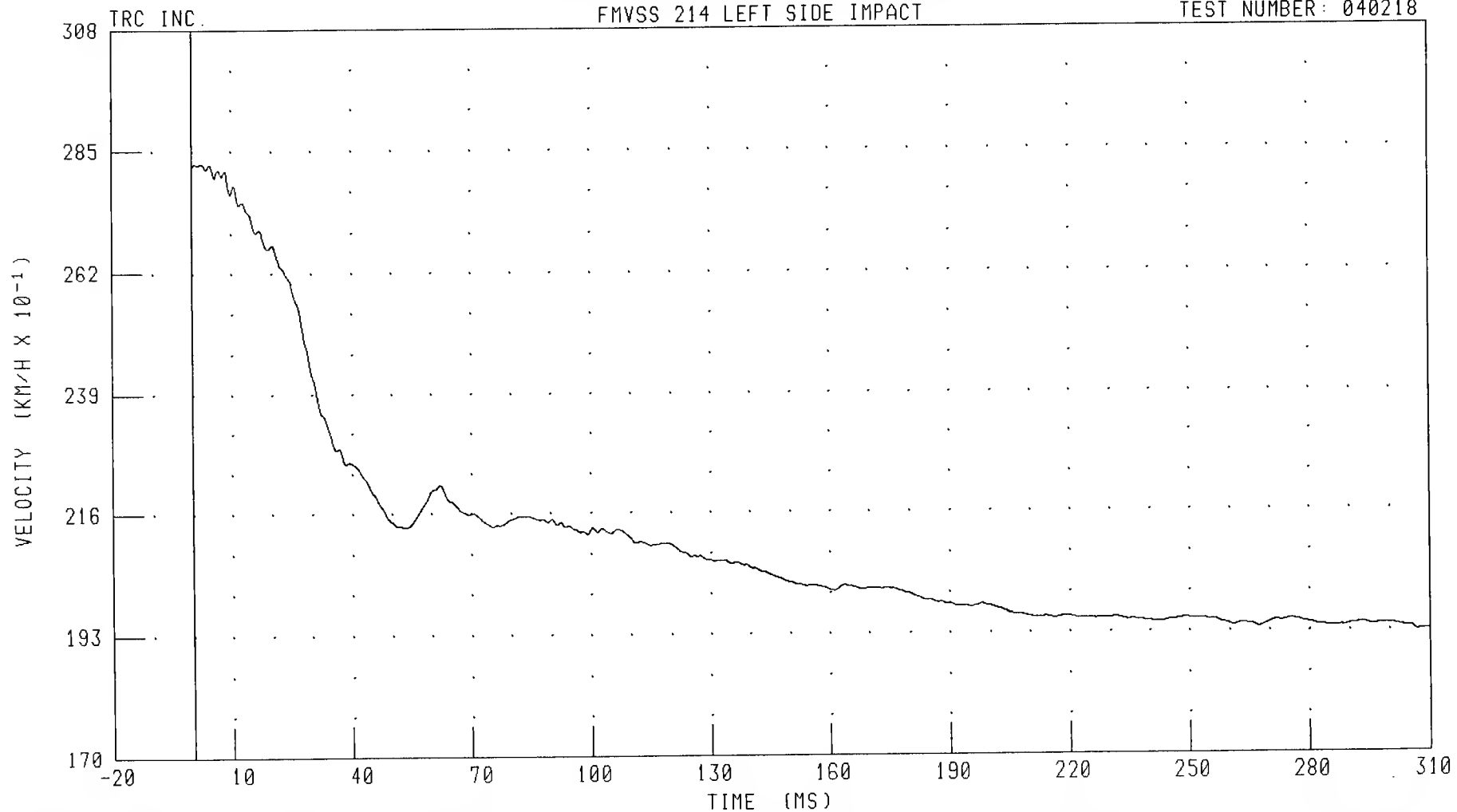
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MOB CENTER OF GRAVITY Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGYV1

FILTER: CH. CLASS 180

PEAK DATA: 28.26 KM/H @ 2.40 MS; 19.30 KM/H @ 306.80 MS

B-144

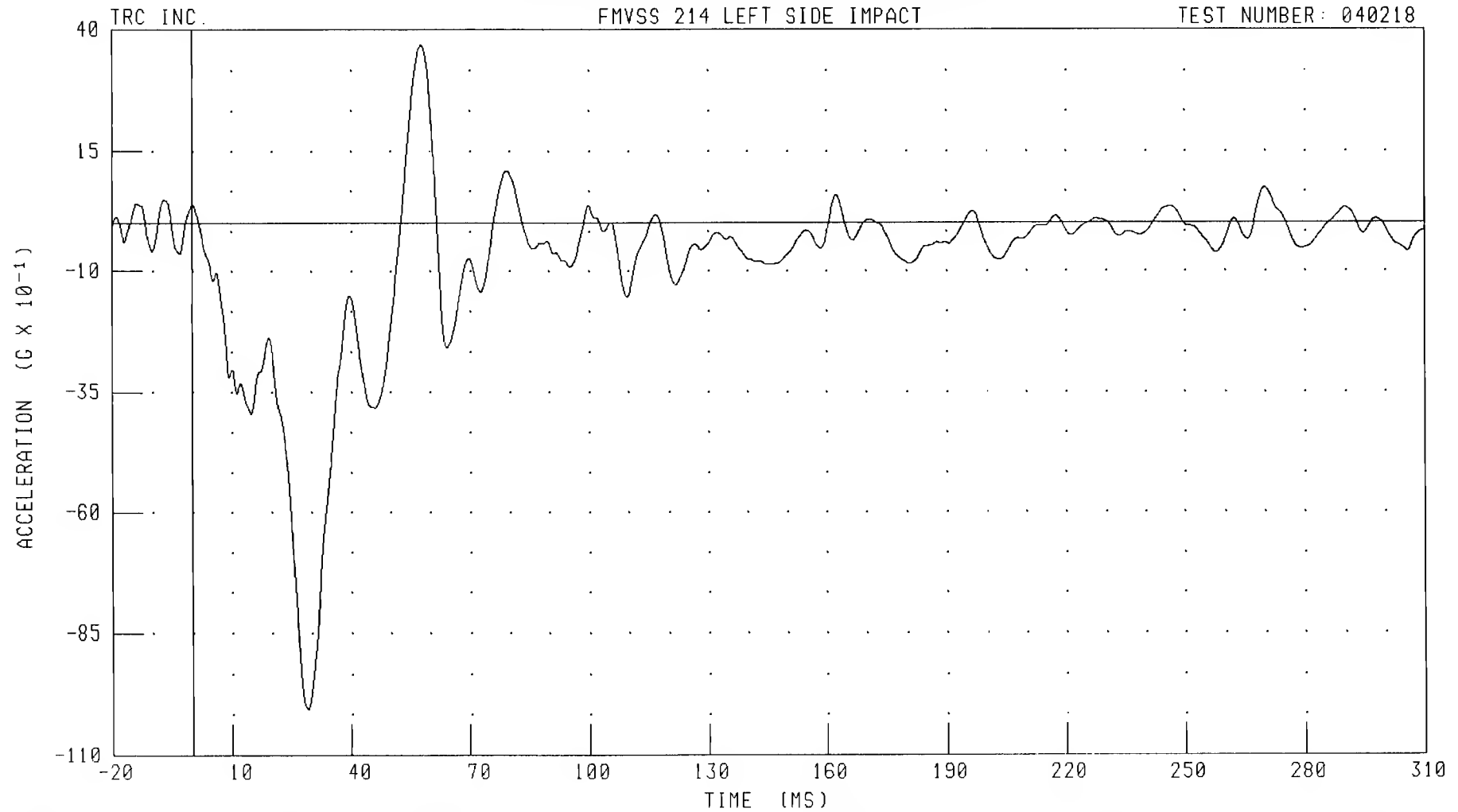
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB CENTER OF GRAVITY Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGYG1 FILTER: CH. CLASS 60

PEAK DATA: 3.68 G @ 57.84 MS; -10.07 G @ 29.04 MS

B-143

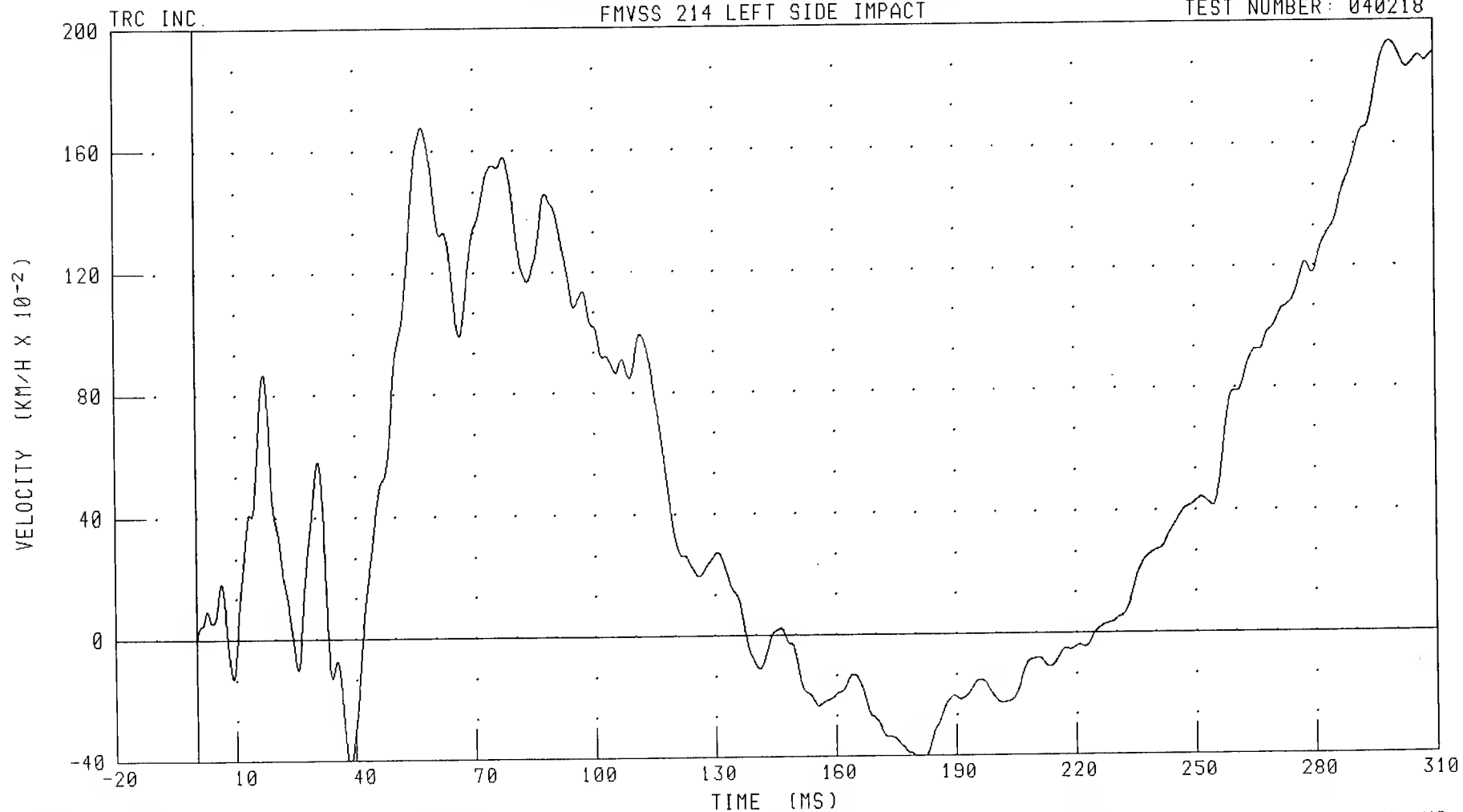
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB CENTER OF GRAVITY Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGZV1 FILTER: CH. CLASS 180

PEAK DATA: 1.93 KM/H @ 299.12 MS; -0.42 KM/H @ 38.40 MS

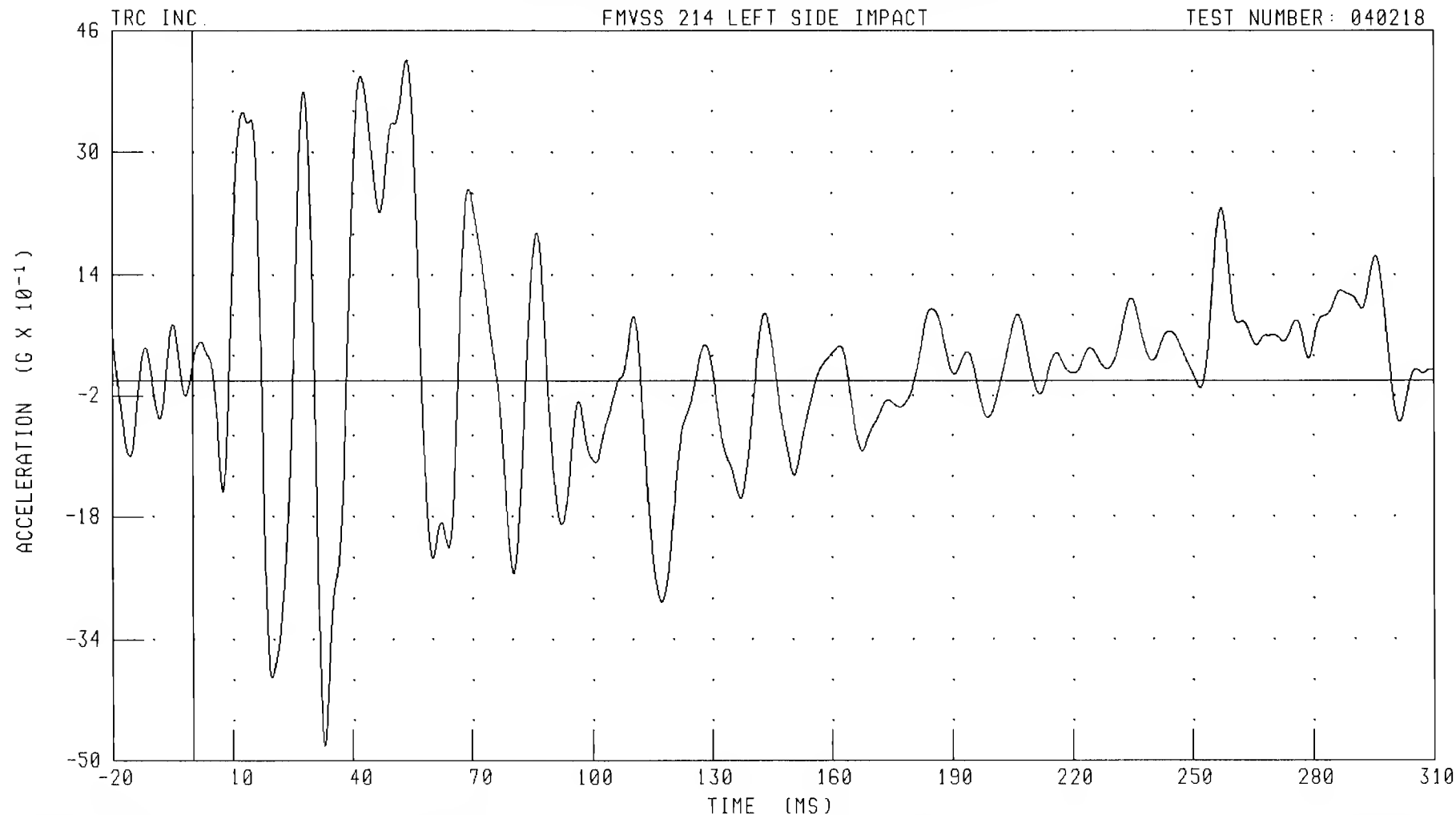
B-146

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
MDB CENTER OF GRAVITY Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGZG1

FILTER: CH. CLASS 60

PEAK DATA: 4.21 G @ 53.68 MS; -4.81 G @ 32.88 MS

B-145

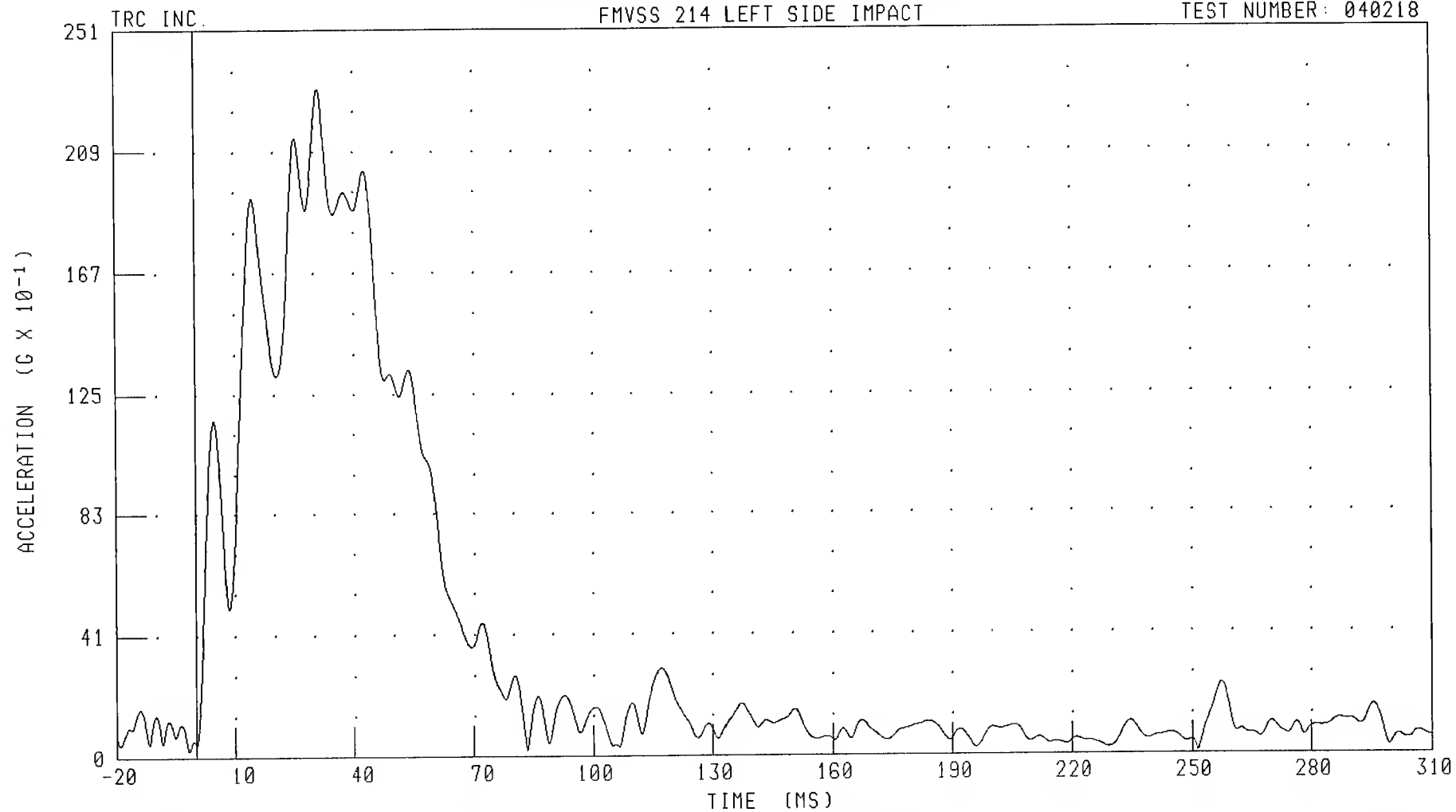
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB CENTER OF GRAVITY RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: BCGRG1 FILTER: CH. CLASS 60

PEAK DATA: 23.20 G @ 31.36 MS; 0.10 G @ 251.44 MS

B-147

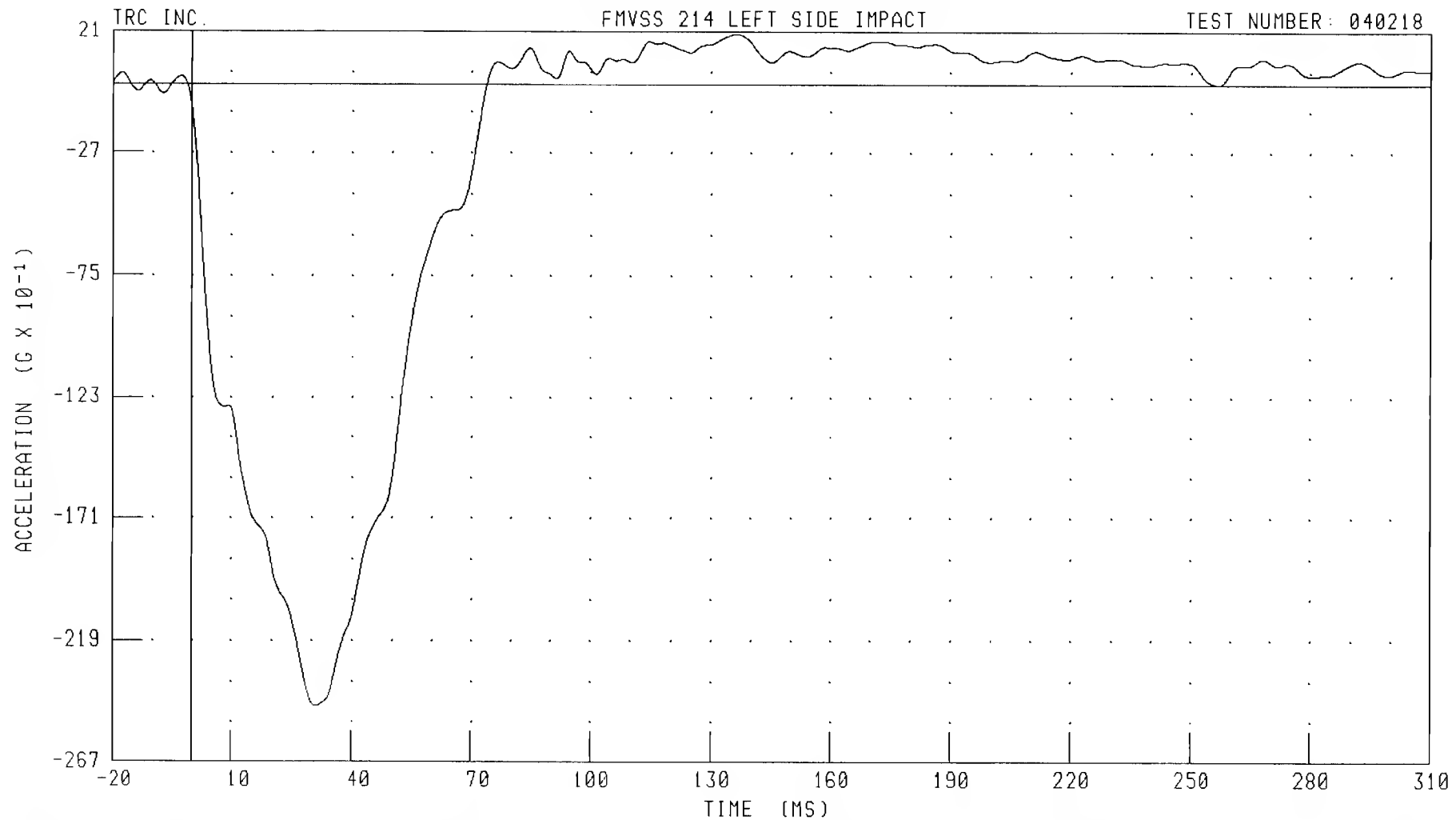
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB LEFT REAR X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRRXG1 FILTER: CH. CLASS 60

PEAK DATA: 1.99 G @ 136.56 MS; -24.49 G @ 30.96 MS

B-148

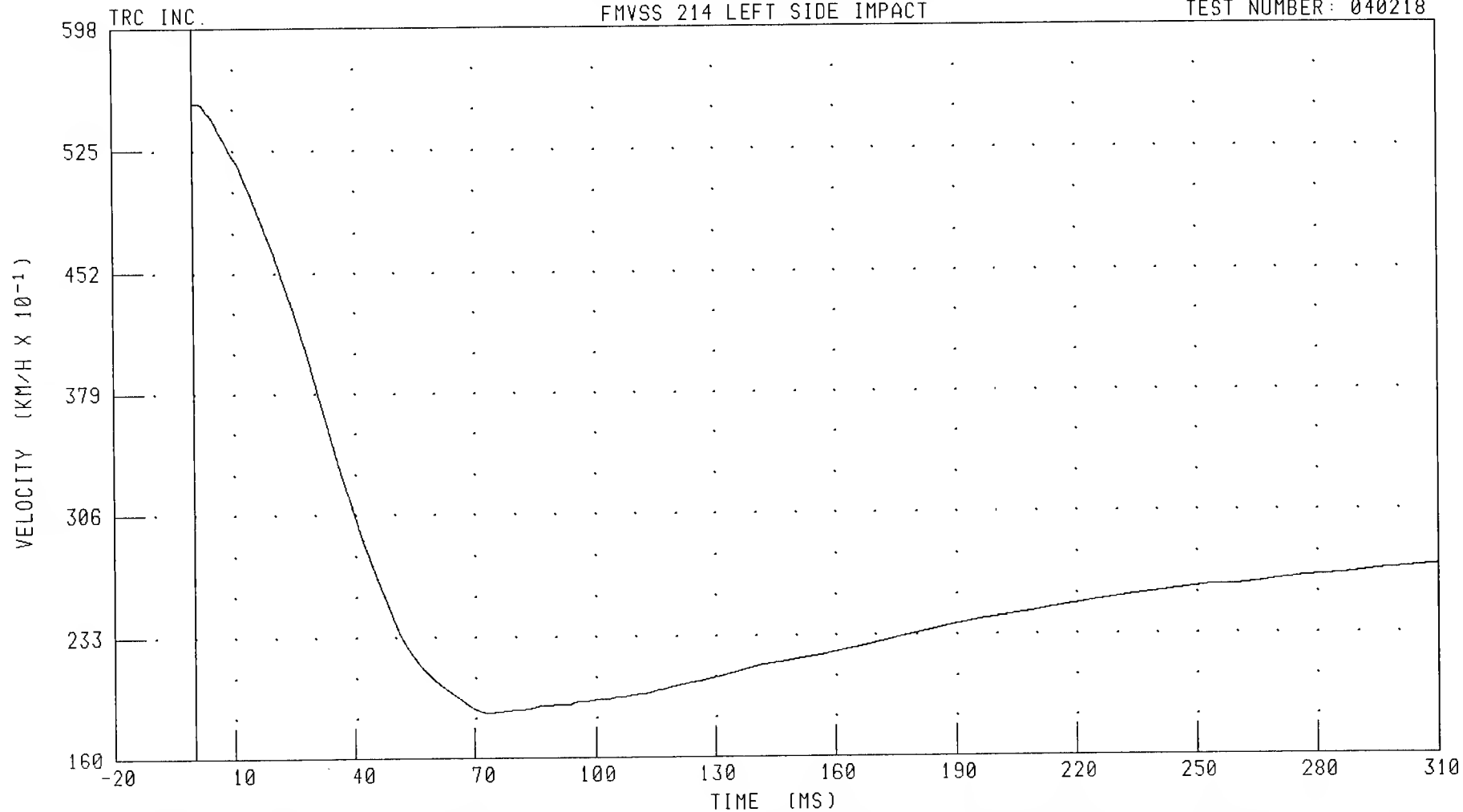
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB LEFT REAR X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRRXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.30 KM/H @ 0.00 MS; 18.72 KM/H @ 73.36 MS

B-149

040218

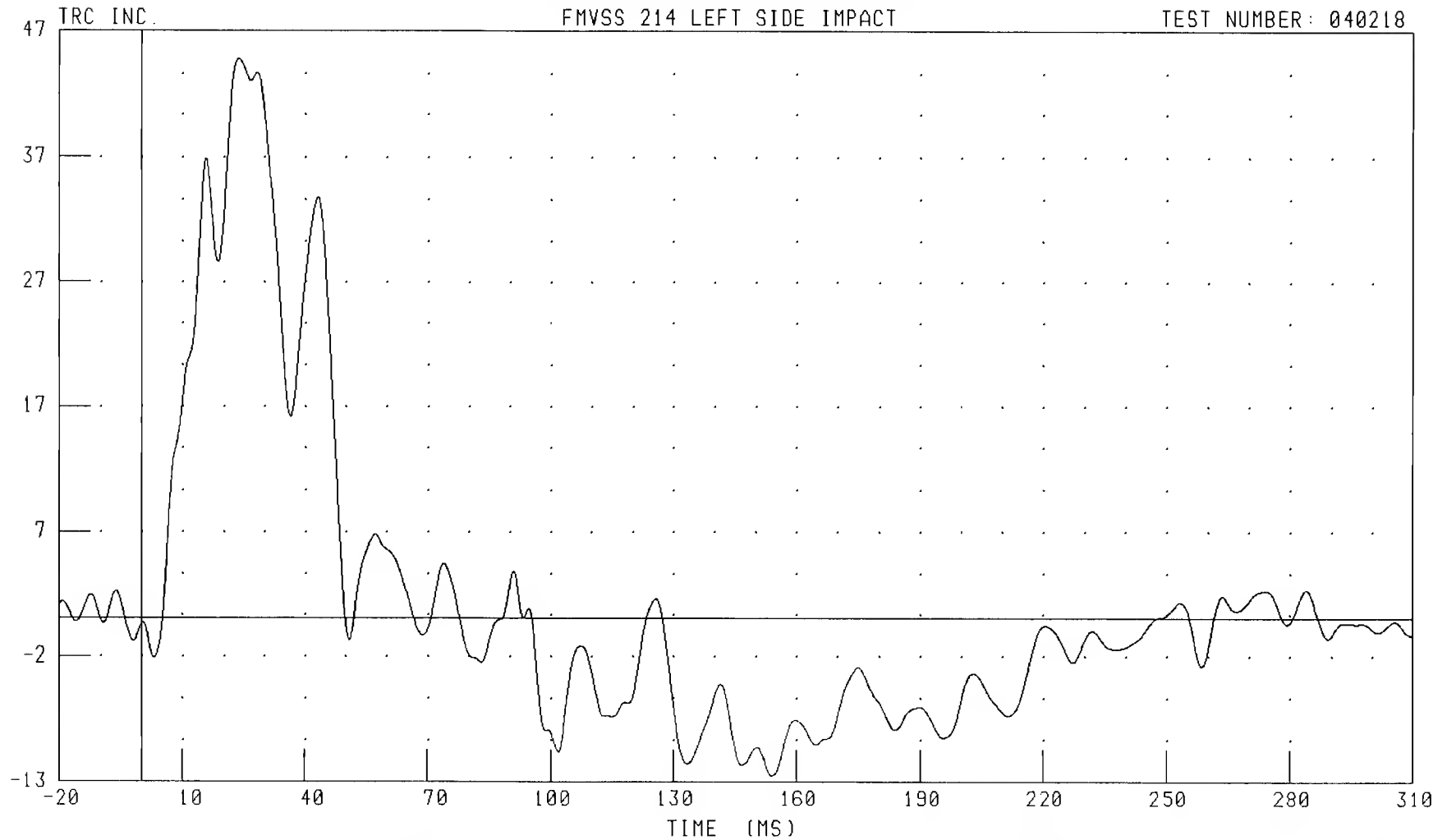
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MOB LEFT REAR Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218

B-150



CHANNEL: LRRYG1 FILTER: CH. CLASS 60

PEAK DATA: 4.48 G @ 23.68 MS; -1.25 G @ 154.00 MS

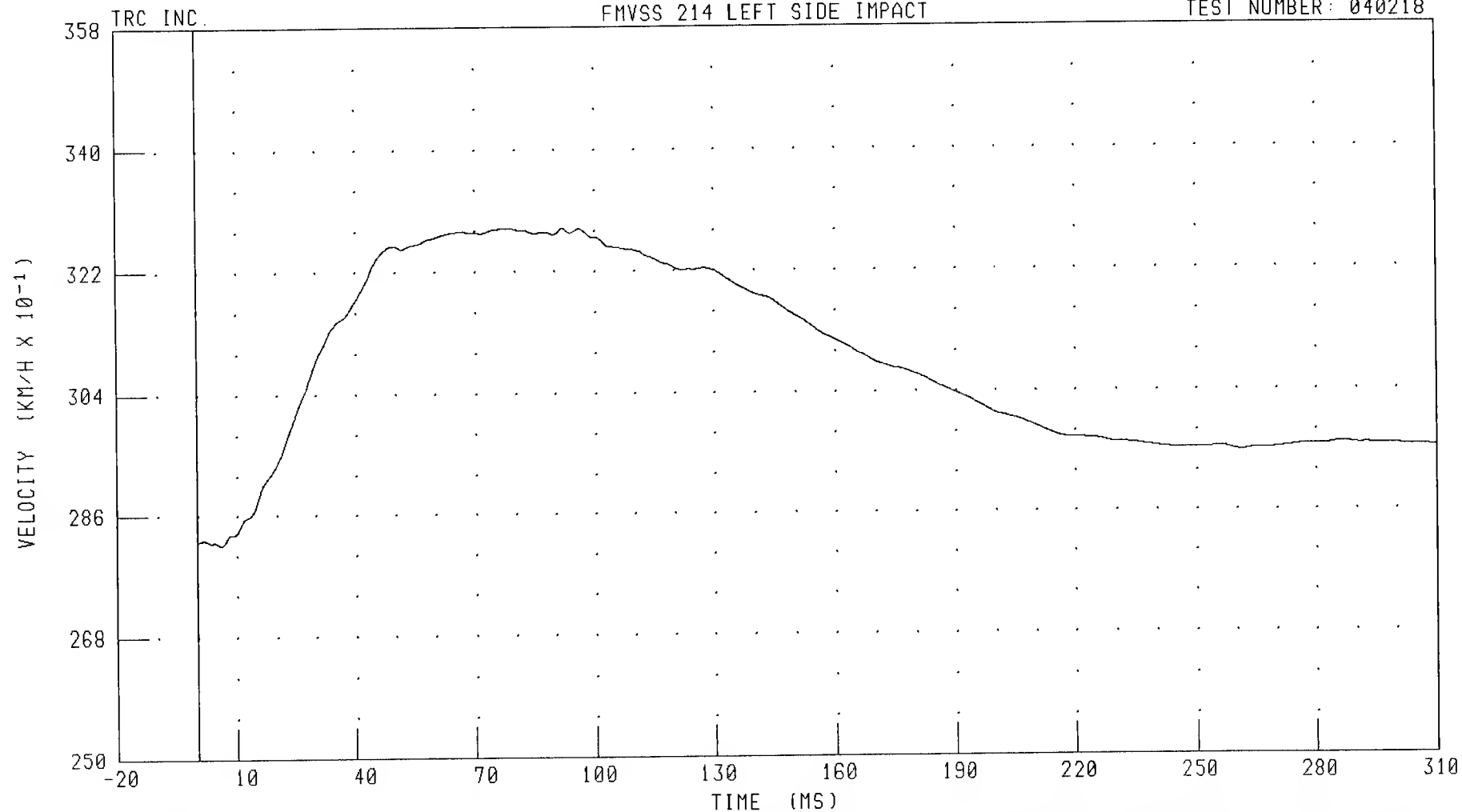
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB LEFT REAR Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LRRYV1 FILTER: CH. CLASS 180

PEAK DATA: 32.84 KM/H @ 78.40 MS; 28.15 KM/H @ 6.16 MS

B-151

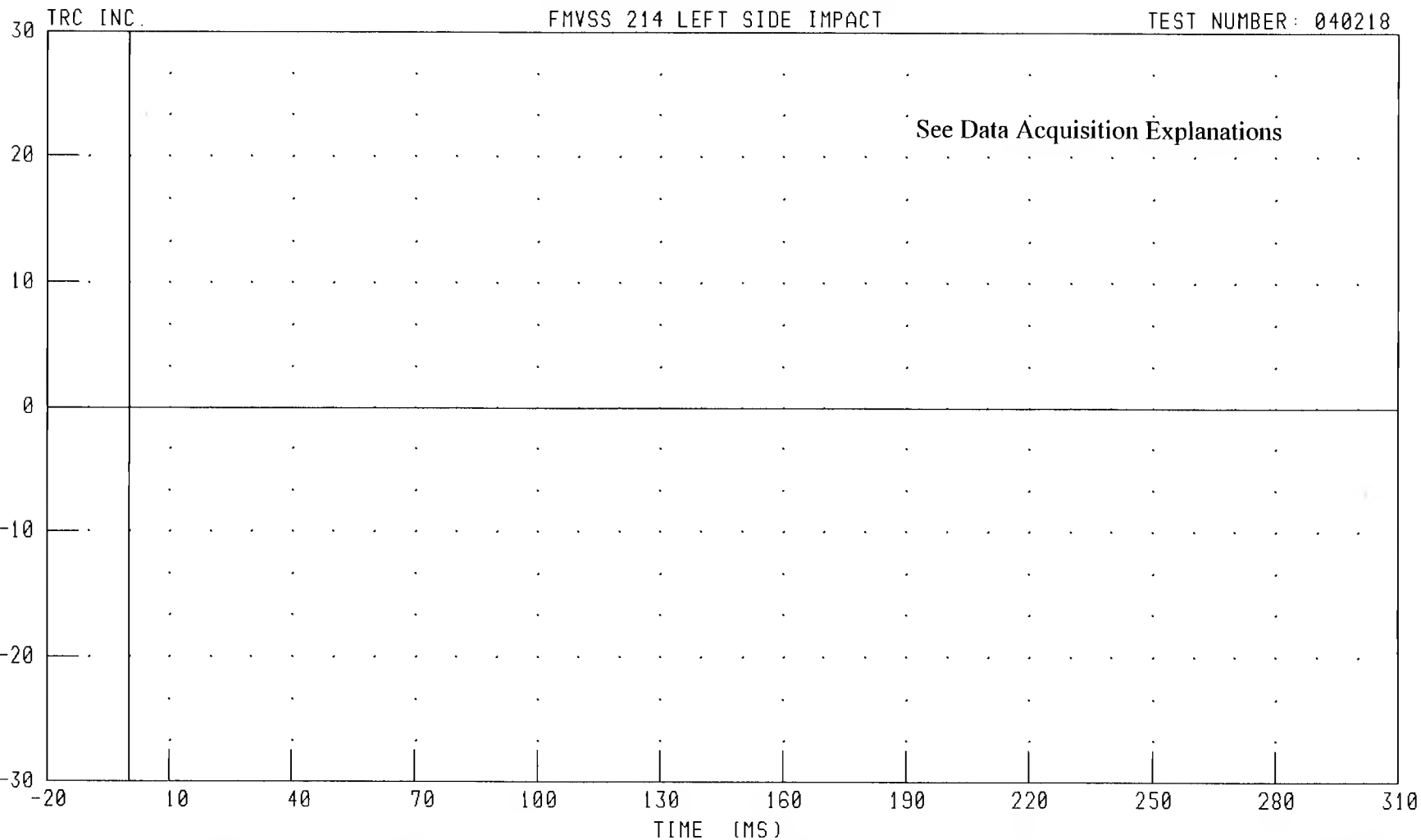
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB RIGHT SIDE CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: MDBR1 FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

B-152

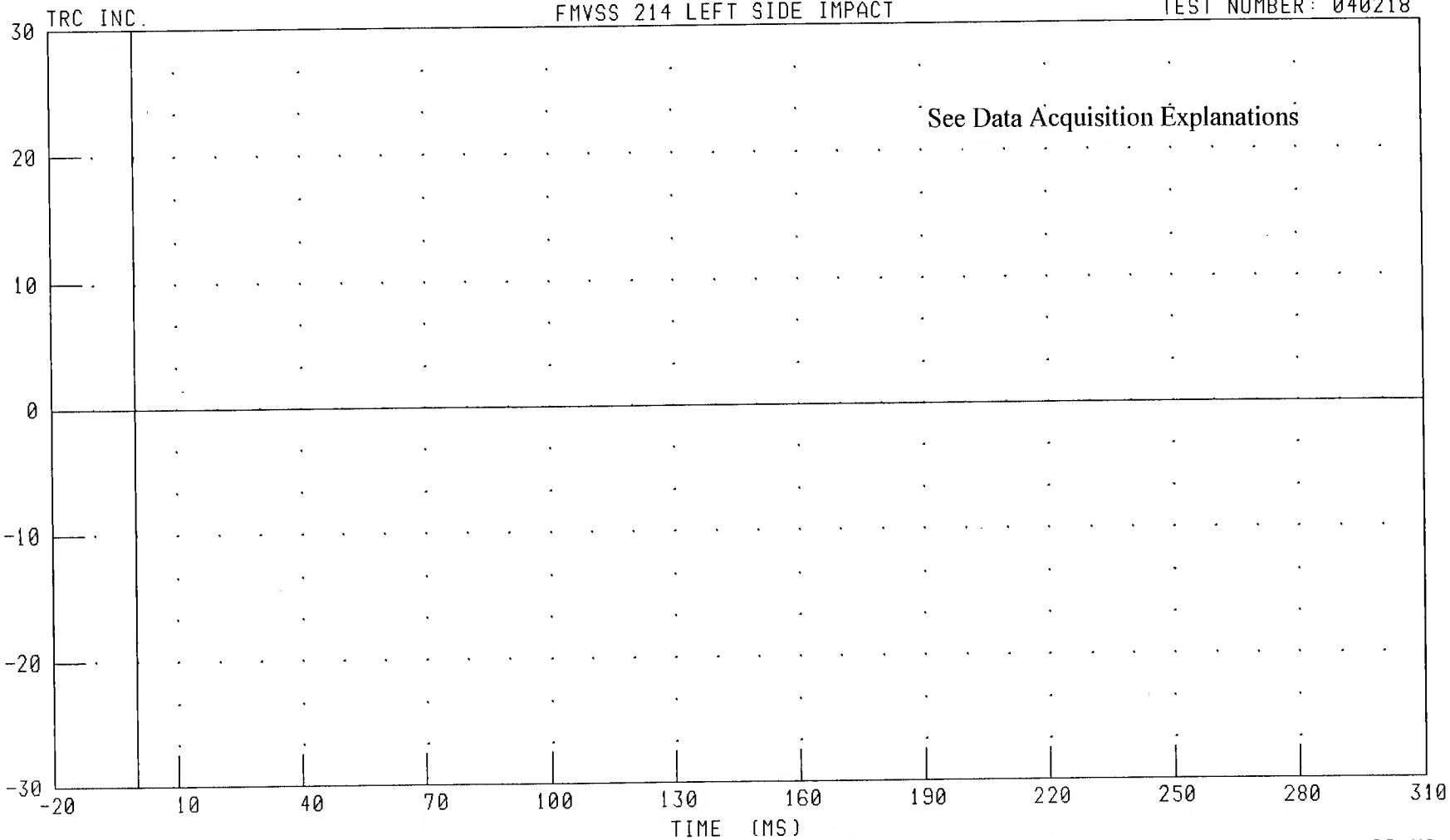
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

MDB LEFT SIDE CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: MDBL1

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

B-153

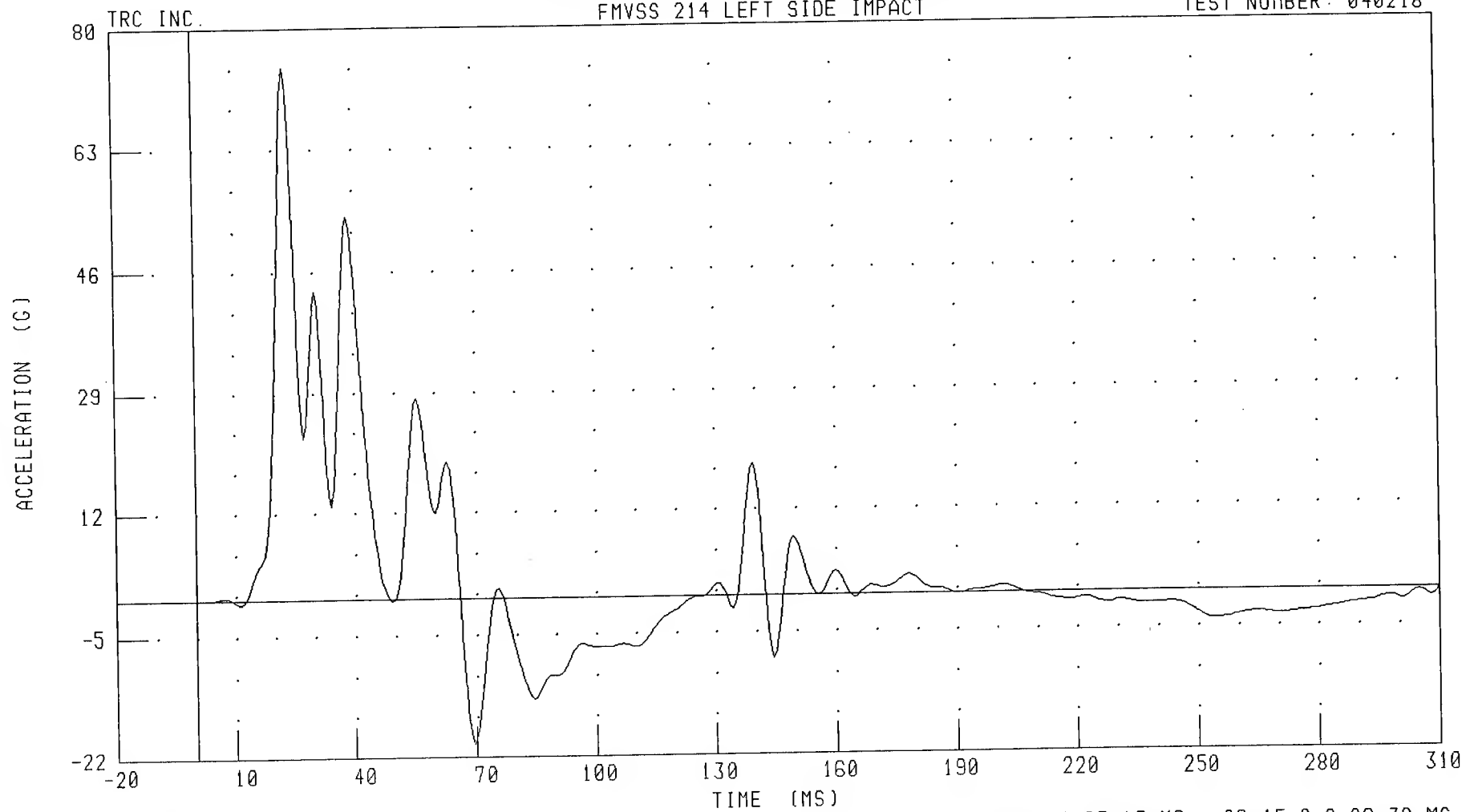
040218

Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYG1 FILTER: FIR 100

PEAK DATA: 74.56 G @ 23.13 MS; -20.15 G @ 69.38 MS

B-155

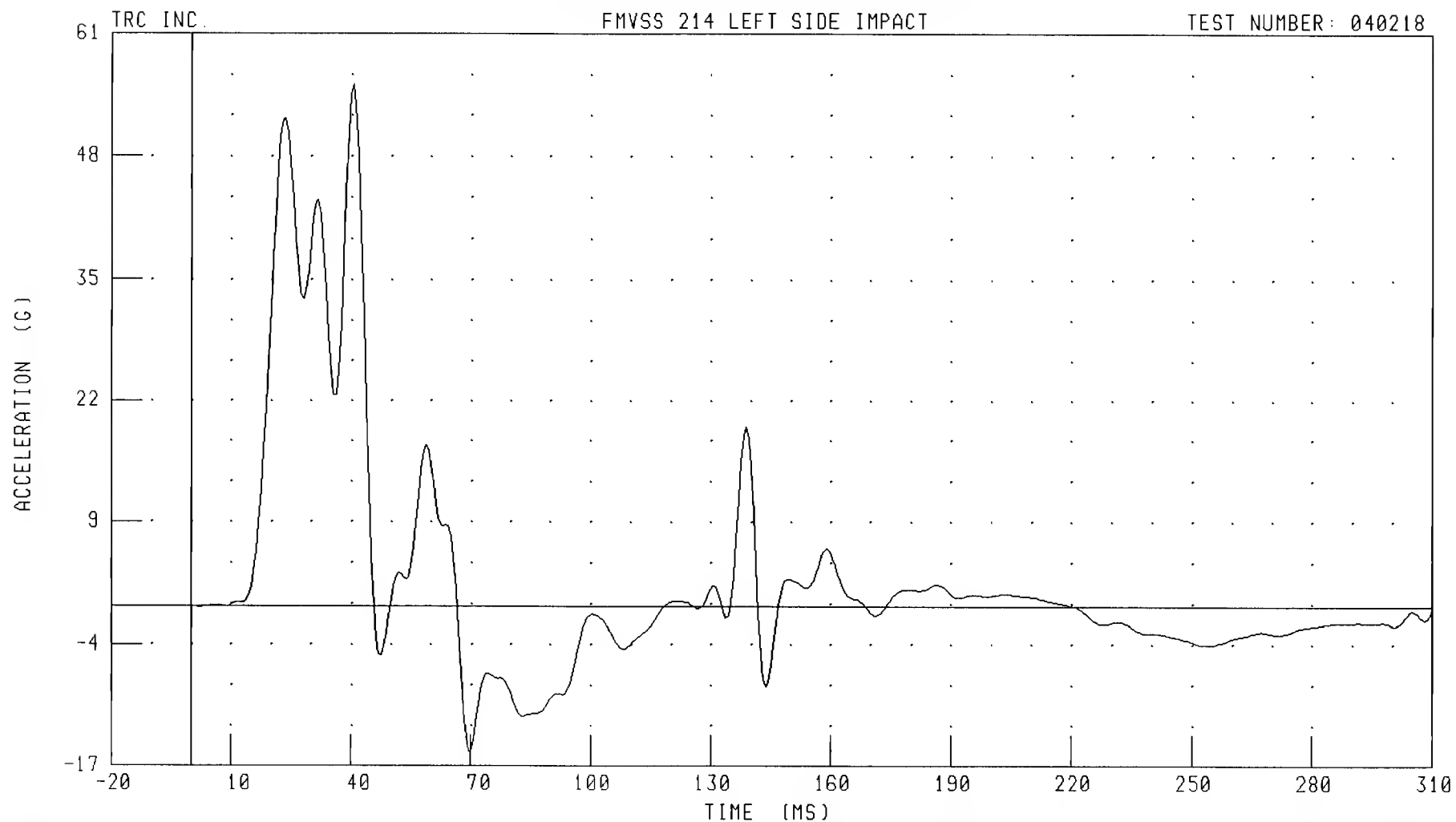
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYG1 FILTER: FIR 100

PEAK DATA: 55.68 G @ 40.63 MS; -15.46 G @ 70.00 MS

B-156

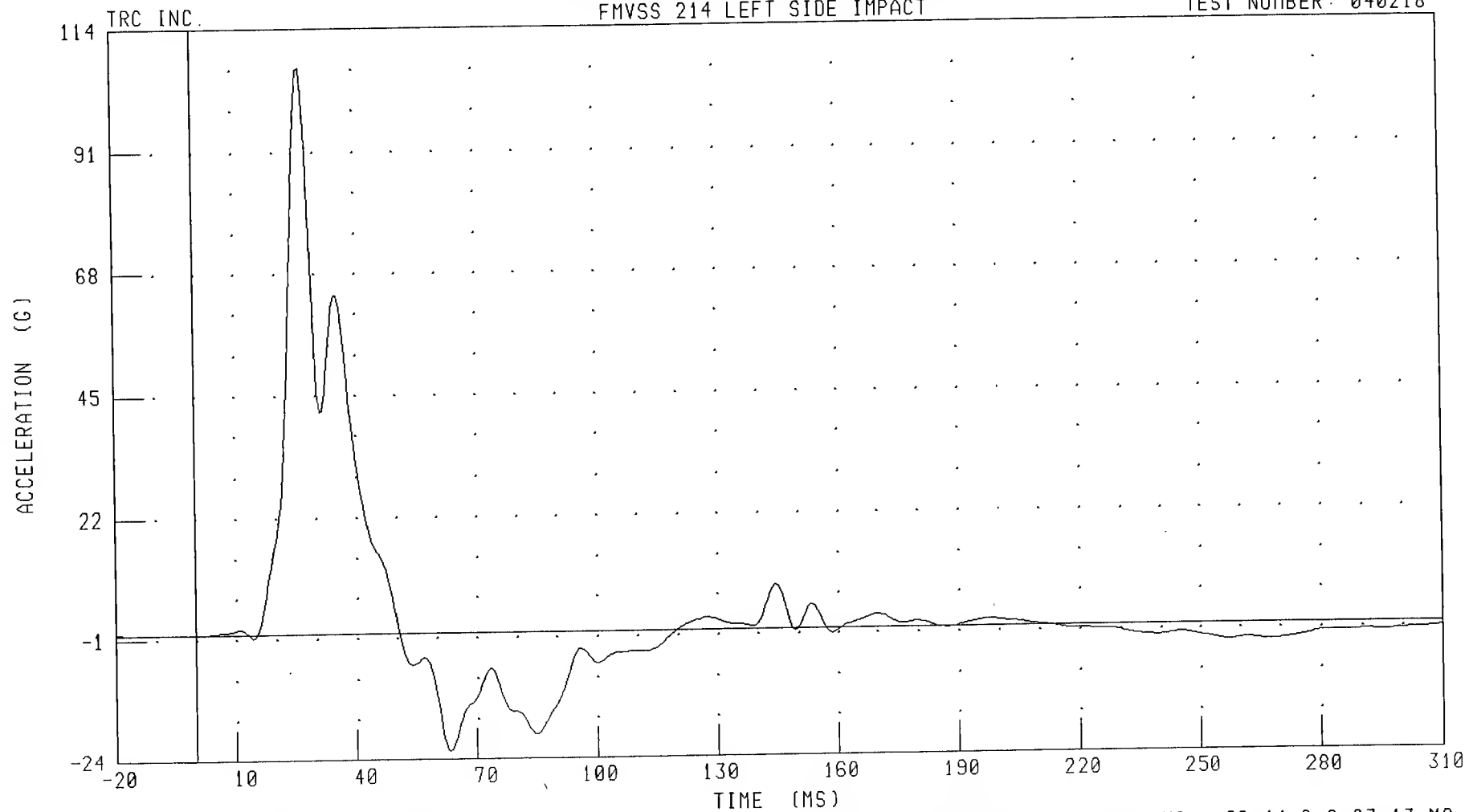
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YG1 FILTER: FIR 100

PEAK DATA: 106.73 G @ 26.87 MS; -22.44 G @ 63.13 MS

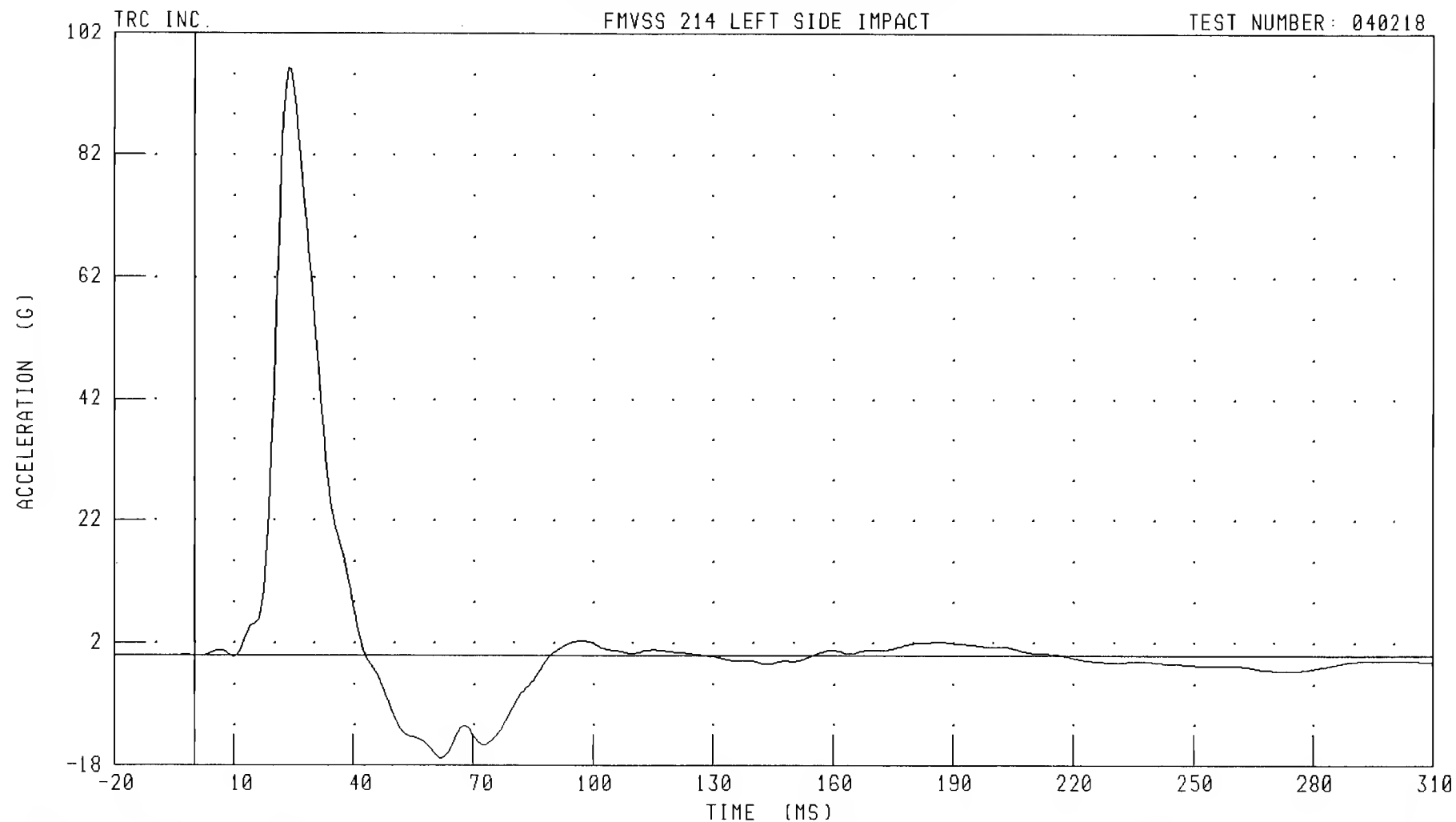
B-157

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYG1 FILTER: FIR 100

PEAK DATA: 96.35 G @ 23.75 MS; -16.78 G @ 61.87 MS

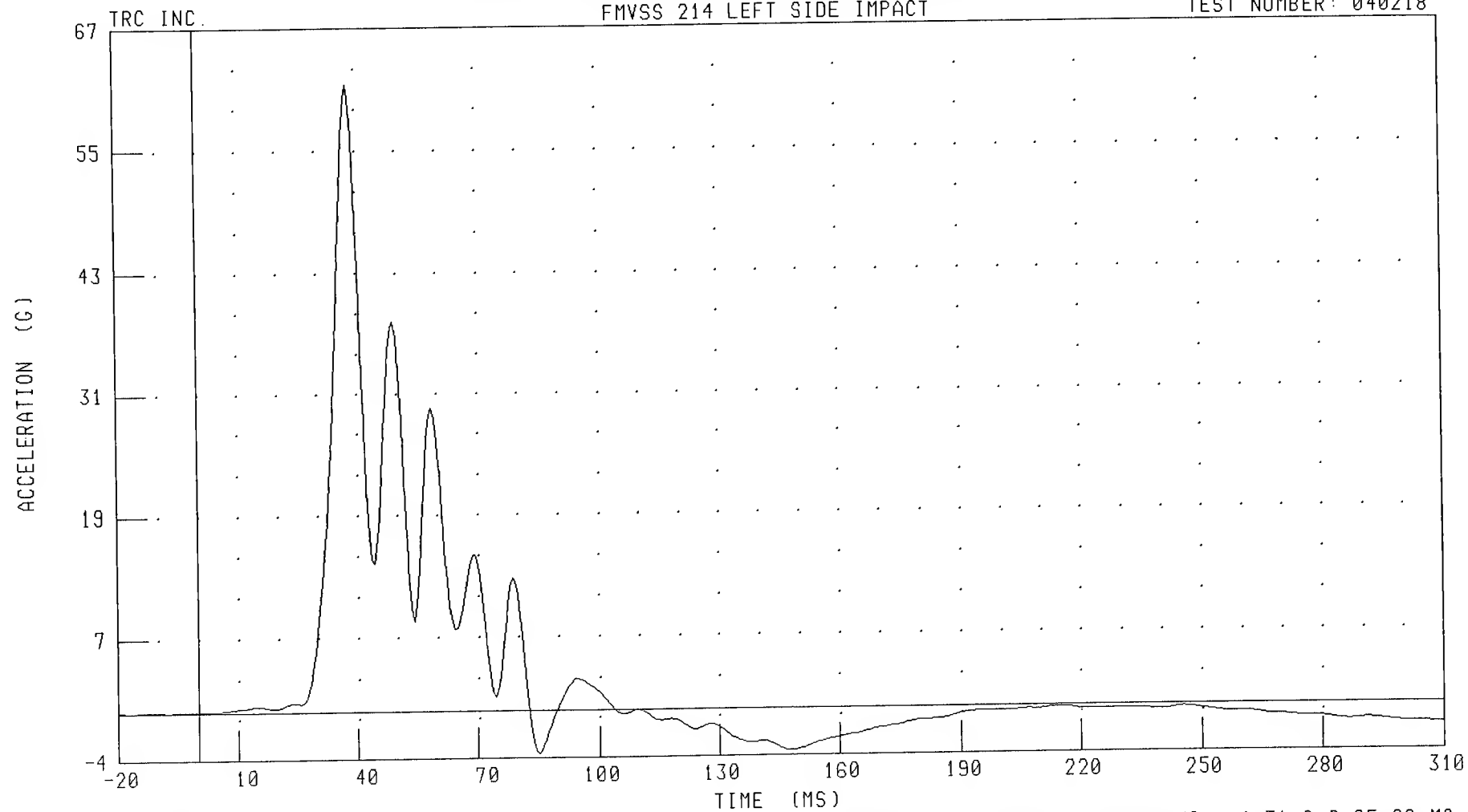
B-158

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYC4 FILTER: FIR 100

PEAK DATA: 61.72 G @ 38.13 MS; -4.31 G @ 85.00 MS

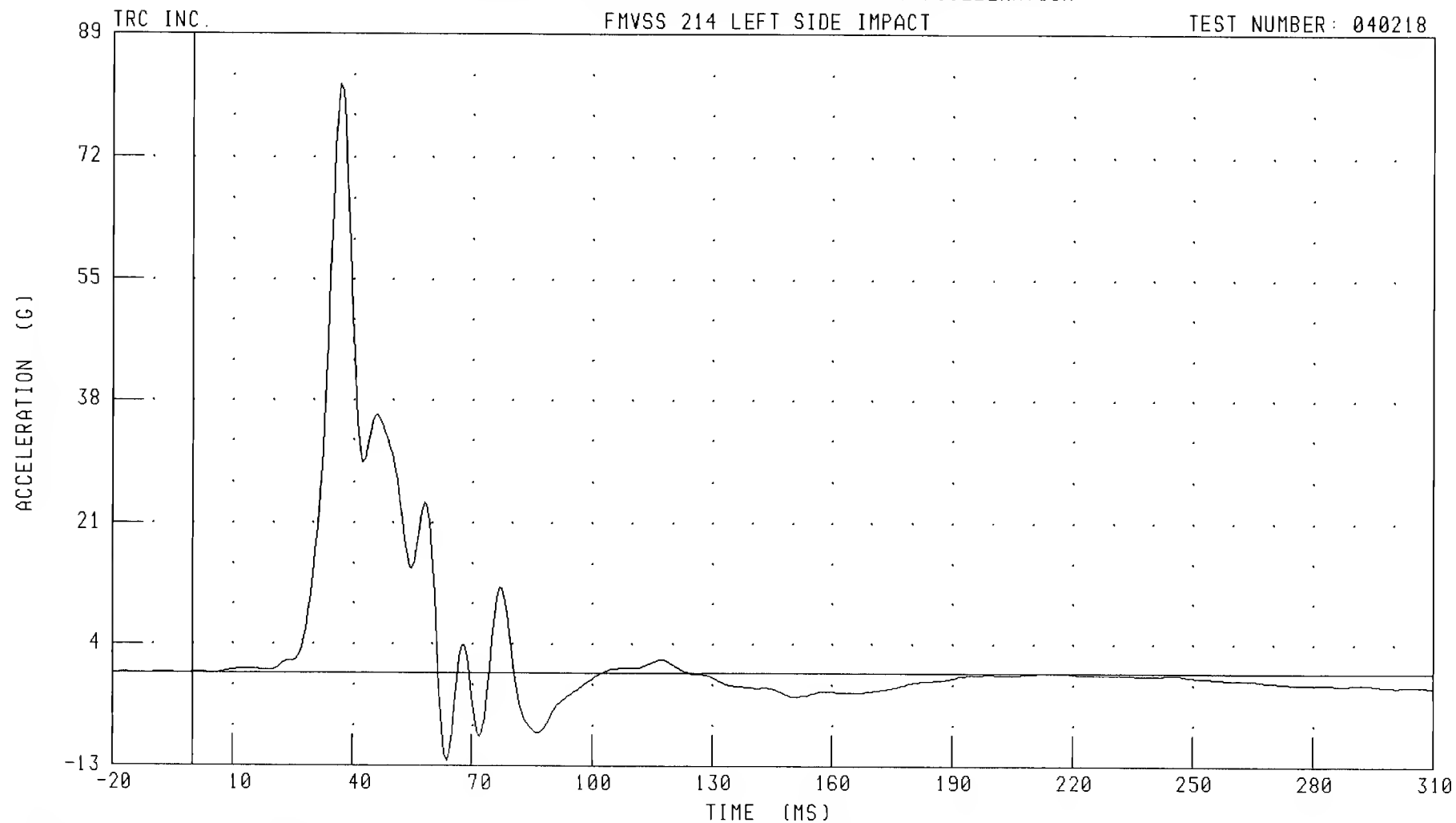
B-159

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYG4 FILTER: FIR 100

PEAK DATA: 81.97 G @ 36.88 MS; -12.33 G @ 63.75 MS

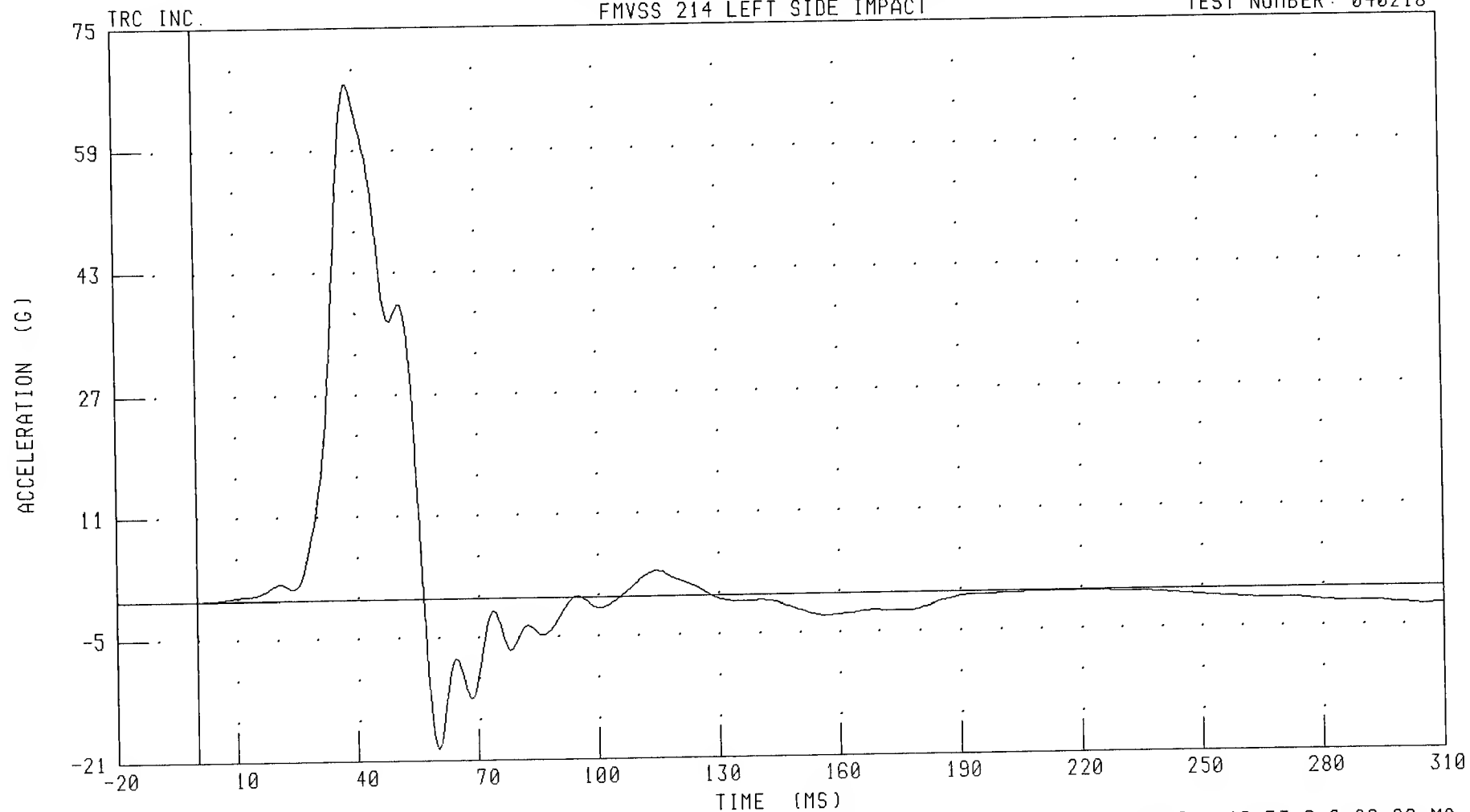
B-160

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YG4 FILTER: FIR 100

PEAK DATA: 67.75 G @ 38.13 MS; -19.53 G @ 60.00 MS

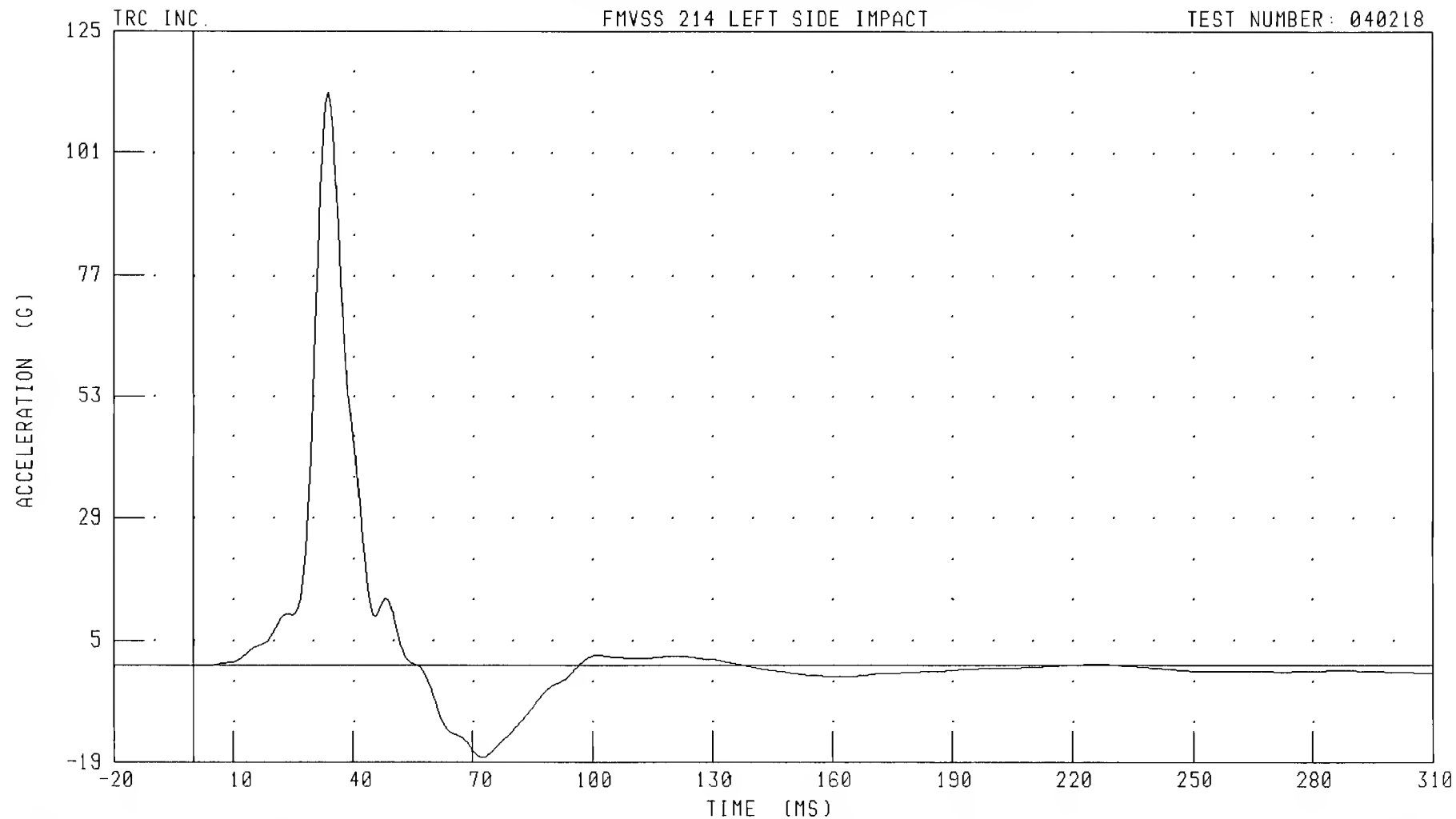
B-161

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYG4 FILTER: FIR 100

PEAK DATA: 112.94 G @ 33.75 MS; -18.04 G @ 72.50 MS

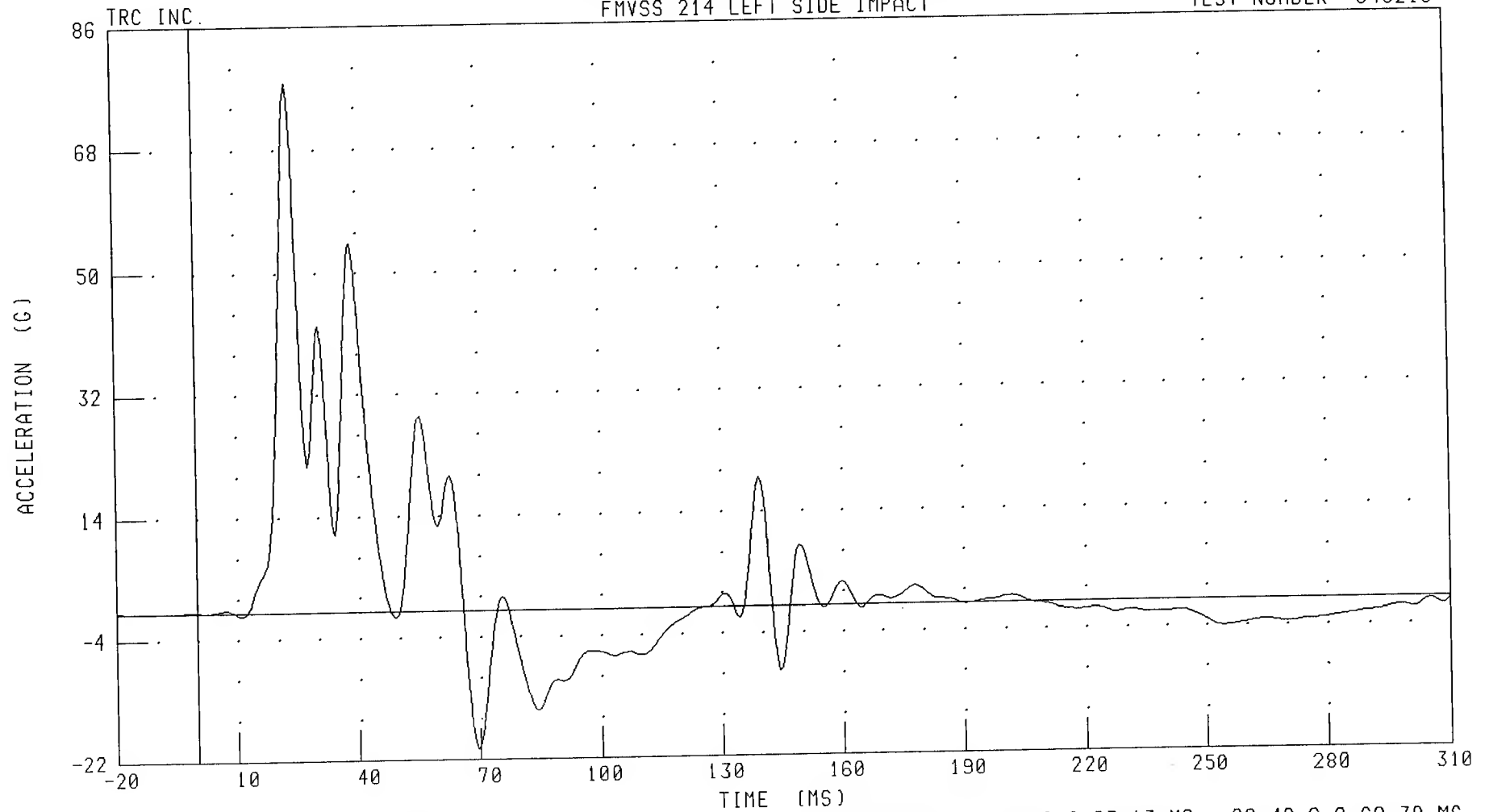
B-162

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYR1 FILTER: FIR 100

PEAK DATA: 77.80 G @ 23.13 MS; -20.49 G @ 69.38 MS

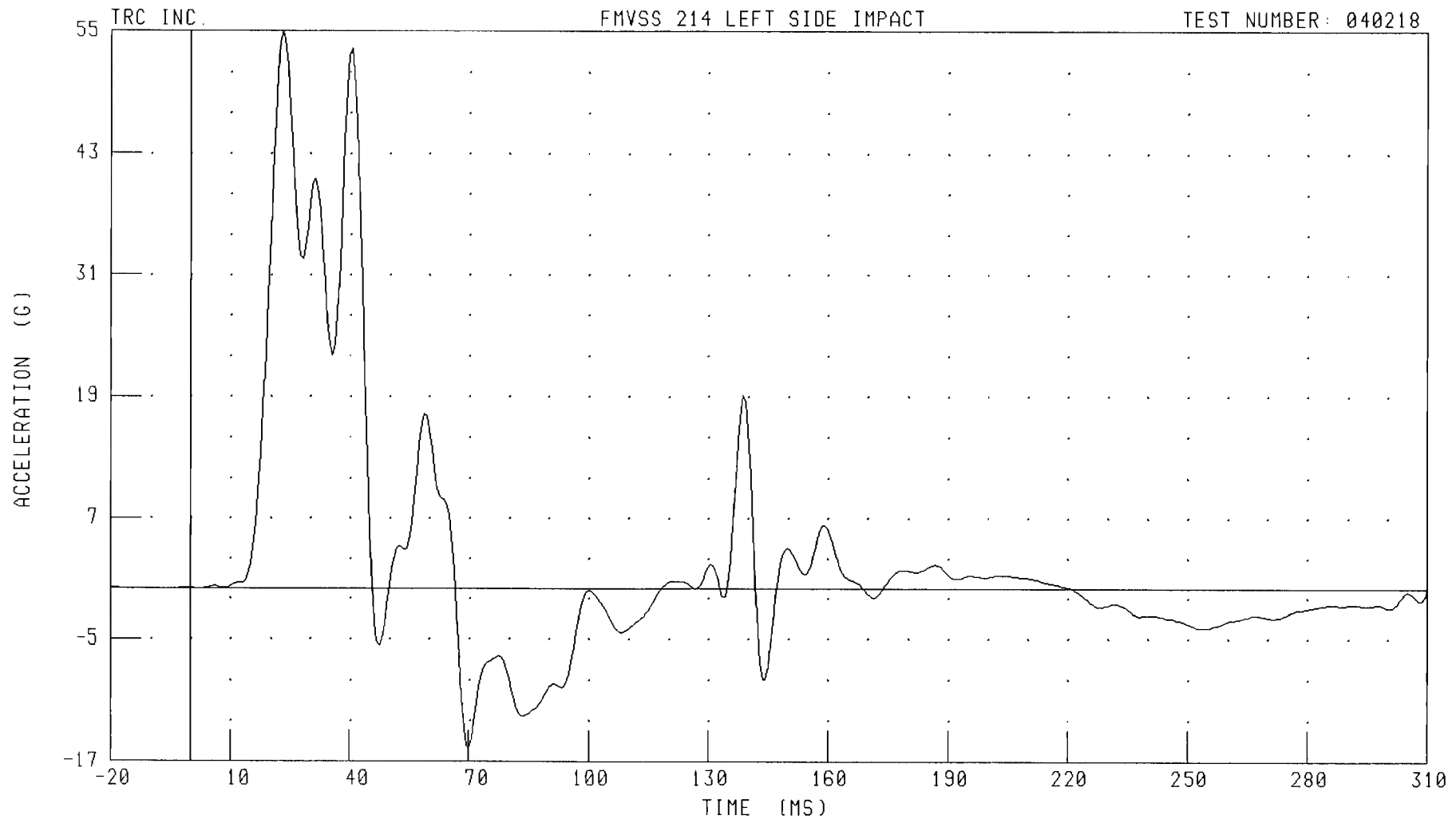
B-163

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYR1 FILTER: FIR 100

PEAK DATA: 55.06 G @ 23.13 MS; -15.70 G @ 70.00 MS

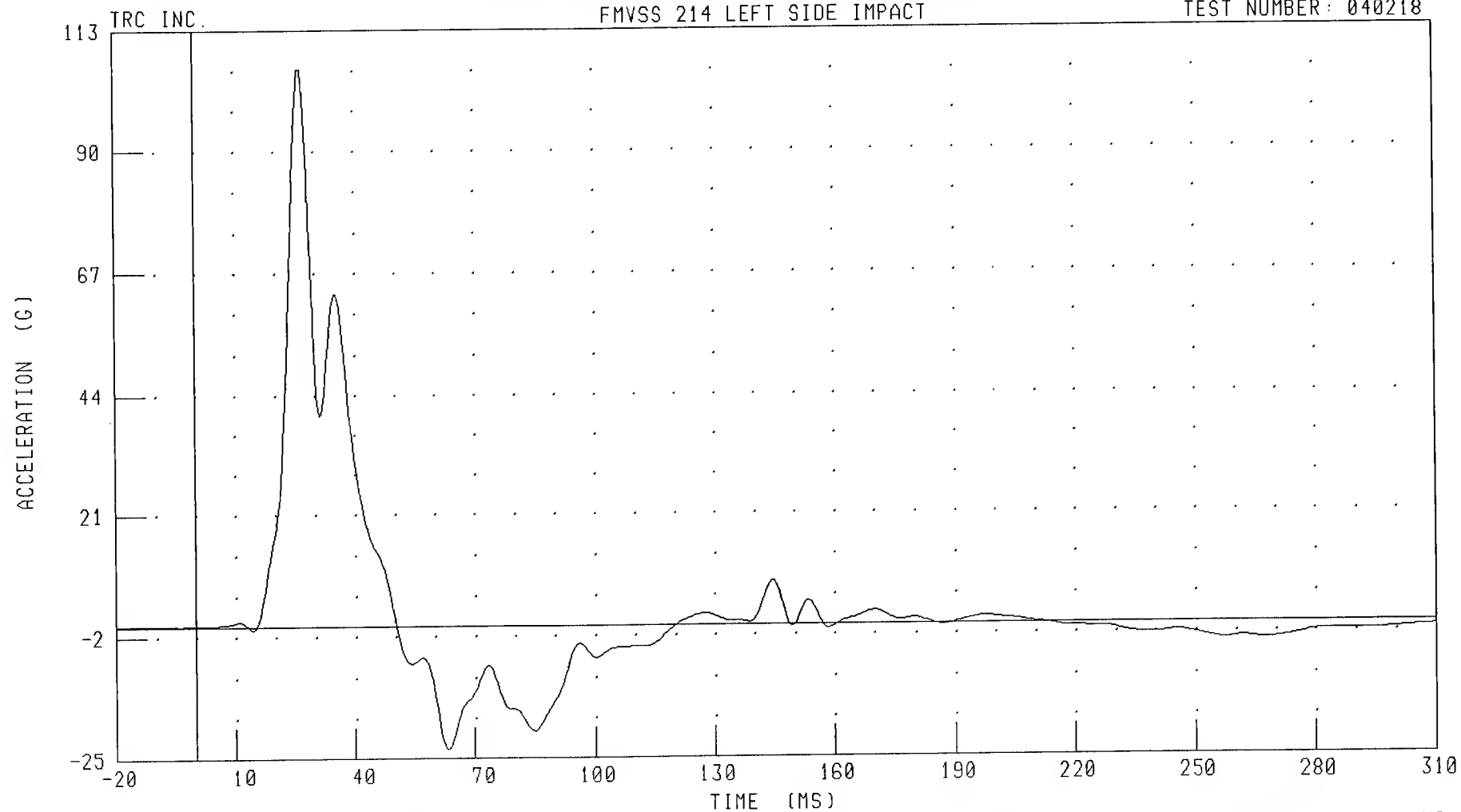
B-164

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YR1 FILTER: FIR 100

PEAK DATA: 105.68 G @ 26.87 MS; -23.30 G @ 63.13 MS

B-165

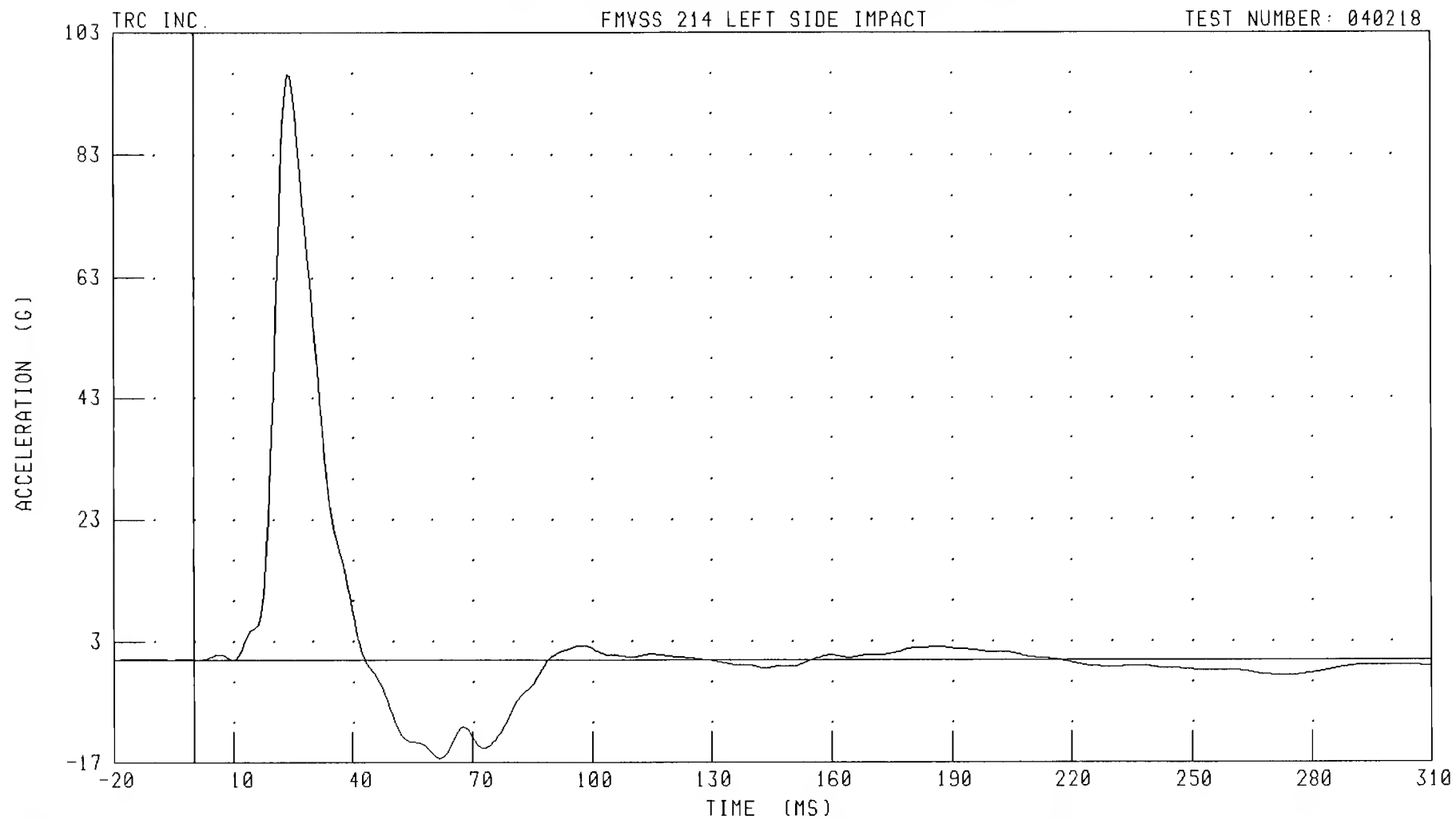
040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA

DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYR1 FILTER: FIR 100

PEAK DATA: 96.16 G @ 23.75 MS; -16.31 G @ 61.87 MS

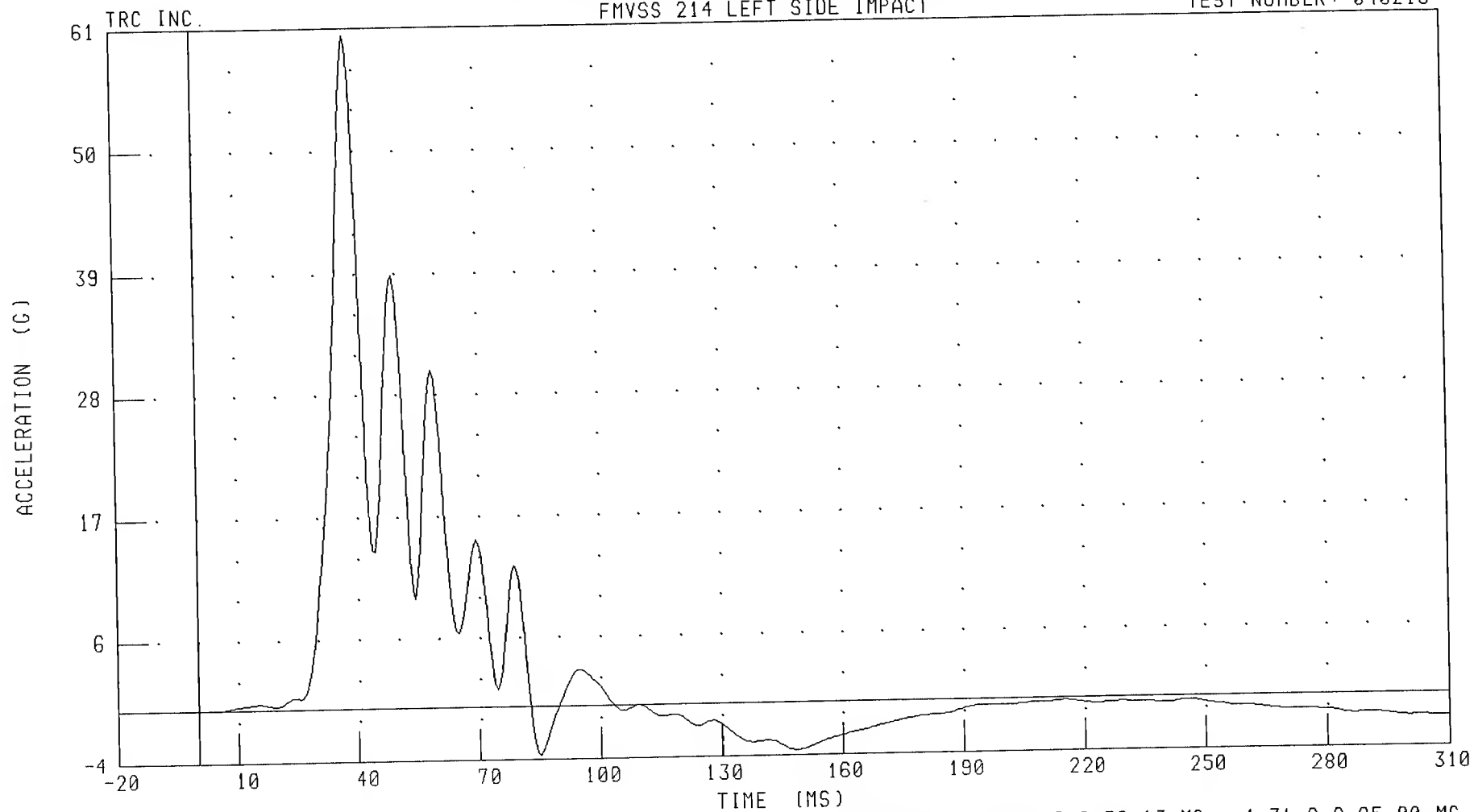
B-166

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LURYR4 FILTER: FIR 100

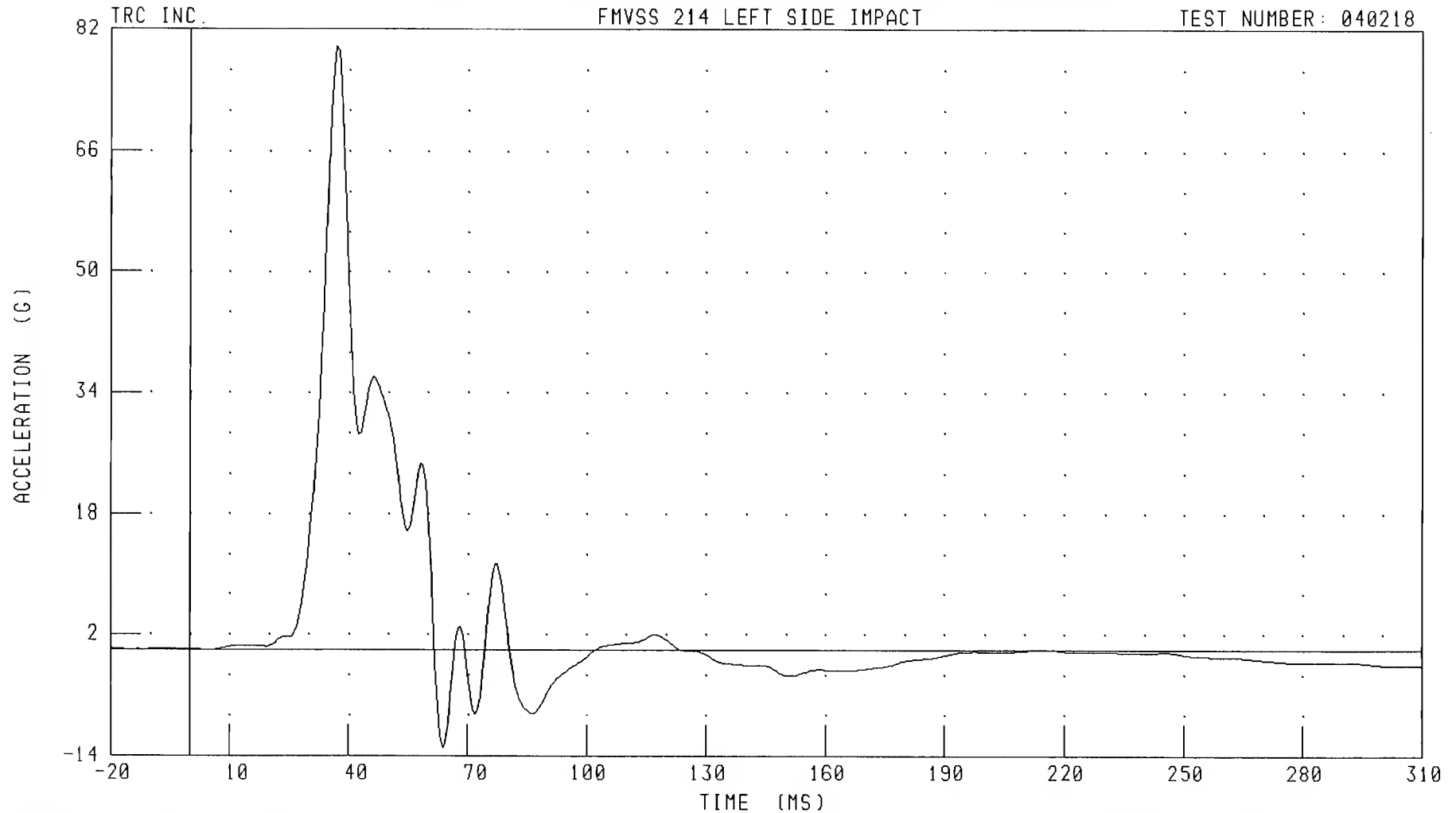
B-167

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: LLRYR4 FILTER: FIR 100

PEAK DATA: 79.79 G @ 36.88 MS; -12.94 G @ 63.75 MS

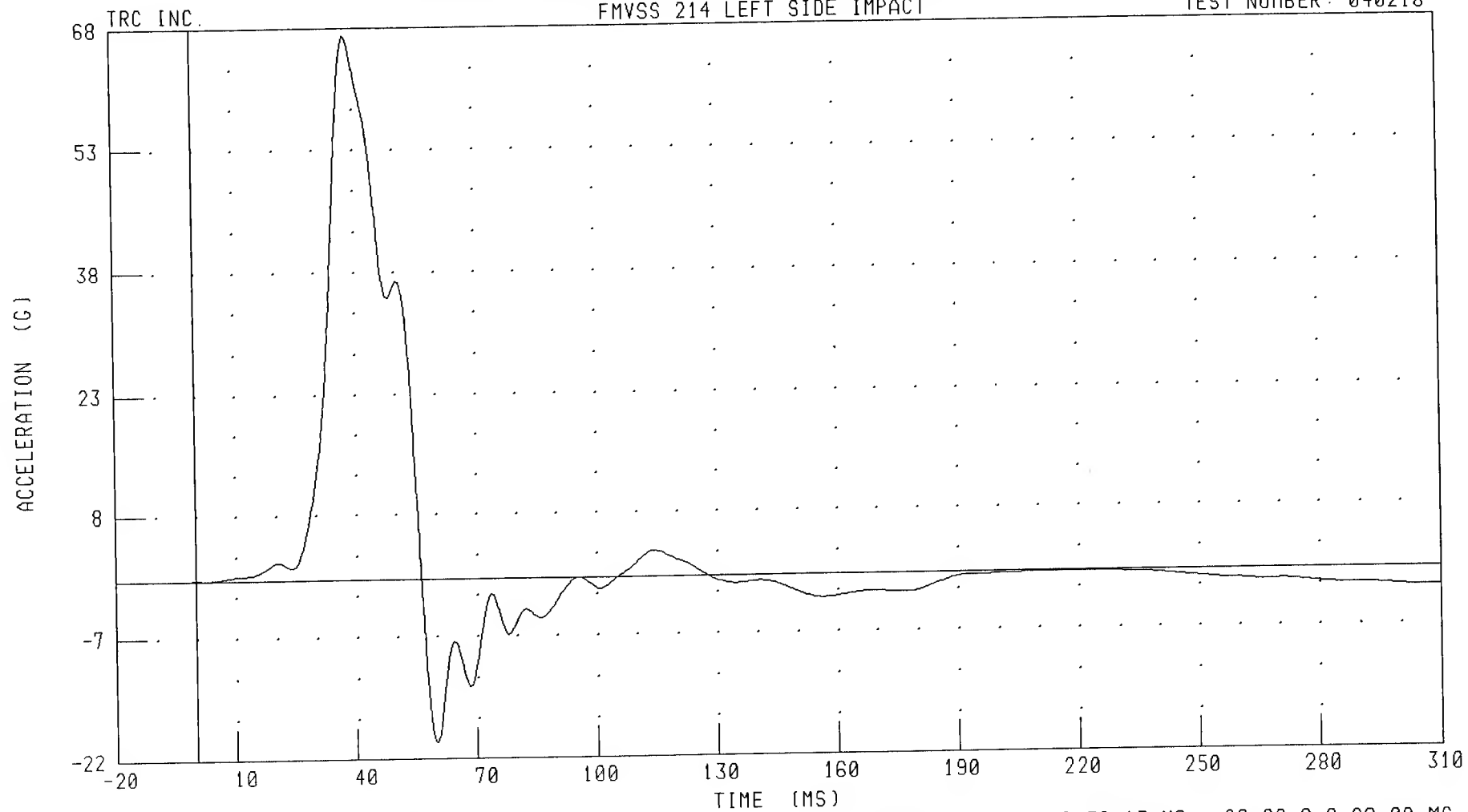
B-168

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: T12YR4 FILTER: FIR 100

PEAK DATA: 67.12 G @ 38.13 MS; -20.00 G @ 60.00 MS

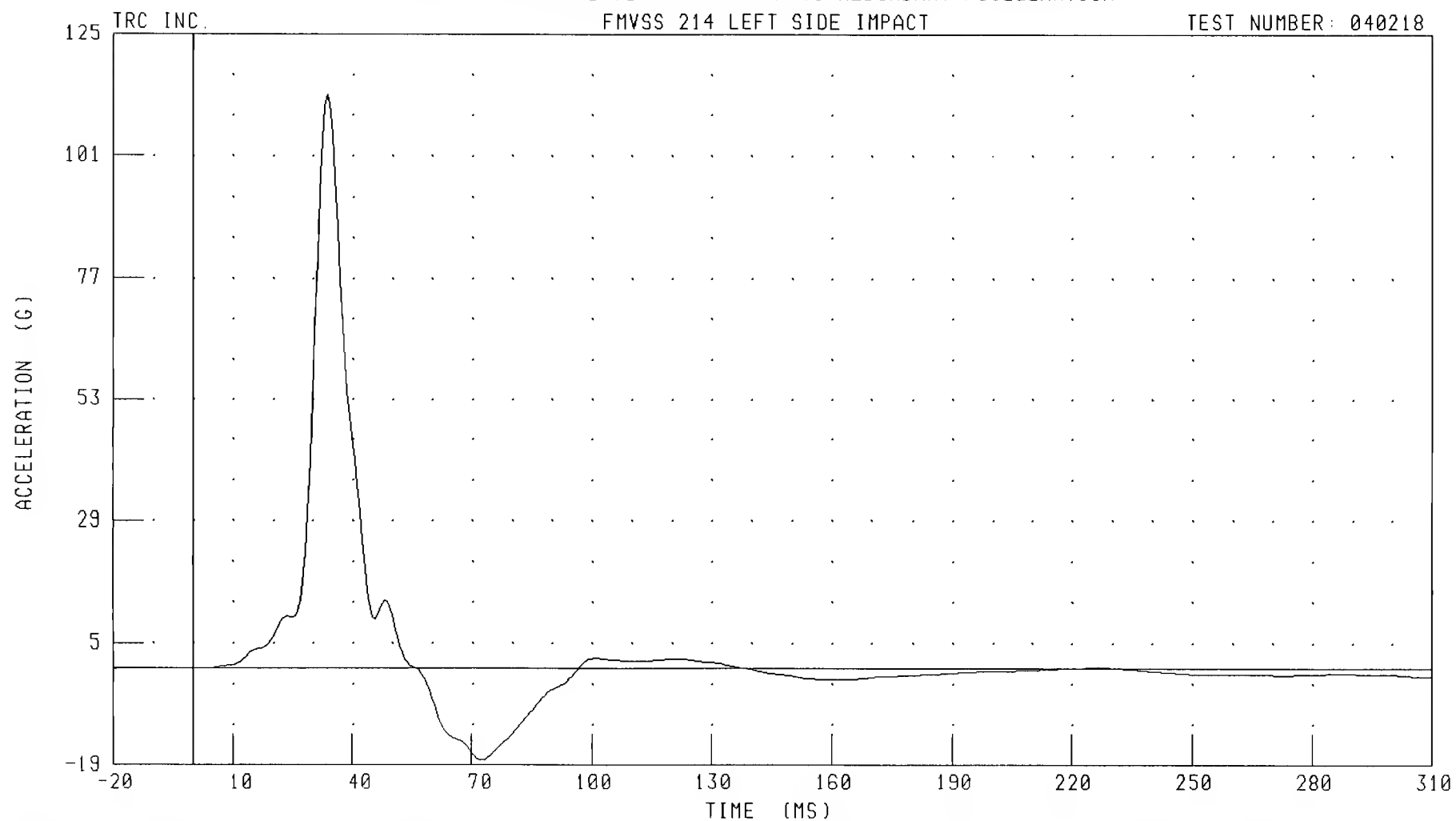
B-169

040218

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 SUZUKI FORENZA
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040218



CHANNEL: PEVYR4 FILTER: FIR 100

PEAK DATA: 113.11 G @ 33.75 MS; -18.07 G @ 72.50 MS

B-170

040218

Appendix C

SID HIII Configuration and Performance Verification Data

Summary
SID HIII Pre-Test and Post-Test Calibration
Configured For Left Side Impact

Date: 02/11/04-03/02/04 TRC Inc. Test Number: S/N 059 & S/N 906
Laboratory Technician: S. Sterling & V. Watters

Test Parameter	Specification	SID HIII 059		SID HIII 906	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH - Seated Height (mm)	889-909	905	907	N/A ¹	895
RH - Rib Height (mm)	502-520	515	506	N/A ¹	500
HP - Hip Pivot Height (mm)	99 ref	99.1	99.1	N/A ¹	99.1
KH - Knee Pivot from Back Line (mm)	511-526	523	524	N/A ¹	525
KV - Knee Pivot to Floor (mm)	490-505	491	500	N/A ¹	495
HW - Hip Width (mm)	356-391	364	362	N/A ¹	375
Thorax Impacts					
Temperature (°C)	18.9-25.5	22.1	21.7	21.8	21.4
Relative Humidity (%)	10-70	31	34	25	35
Probe Speed (m/s)	4.27-4.33	4.27	4.32	4.28	4.31
Upper Rib (g's)	37-46	43.3	39.2	43.3	41.8
Lower Rib (g's)	37-46	41.1	38.0	44.0	42.9
Lower Spine (g's)	15-22	21.6	20.1	18.3	18.6
Pelvis Impacts					
Temperature (°C)	18.9-25.5	21.9	21.4	21.8	22.1
Relative Humidity (%)	10-70	29	34	25	28
Probe Speed (m/s)	4.27-4.33	4.27	4.32	4.28	4.29
Pelvis (g's)	40-60	45.9	48.1	53.3	52.6

¹ Pre-test information not collected due to laboratory error.

Calibration Test Results

Pre-Test

SID HIII: 059

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was tested on September 11, 2003 for a previous calibration series.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.

SID/HIII Dummy

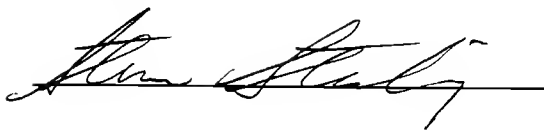
External Dimensions

Serial No. 059 Calibration No. 05

Date: 2/12/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	905 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	515 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	523 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	491 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	364 mm	Yes
Top Rib Width From CL	RW-1	165.1 - 180.3 mm	173 mm	Yes
Bottom Rib Width From CL	RW-2	165.1 - 180.3 mm	171 mm	Yes
Difference Between Top & Bottom Rib Width from CL		<= 2.5 mm	2.0 mm	Yes

Technician



Approved



Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 05 - 4

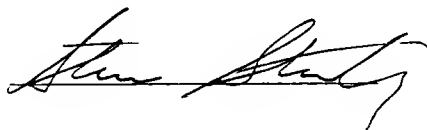
Test Date 02/11/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	26 %	Yes
Peak Resultant Acceleration	120 - 150 g	142.8 g	Yes
Peak Longitudinal Acceleration	15 g Max	-4.5 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes


Comments:

Pre-test calibration. New head skin installed.

Technician



Approved



02.12.2004 09:06:58 607



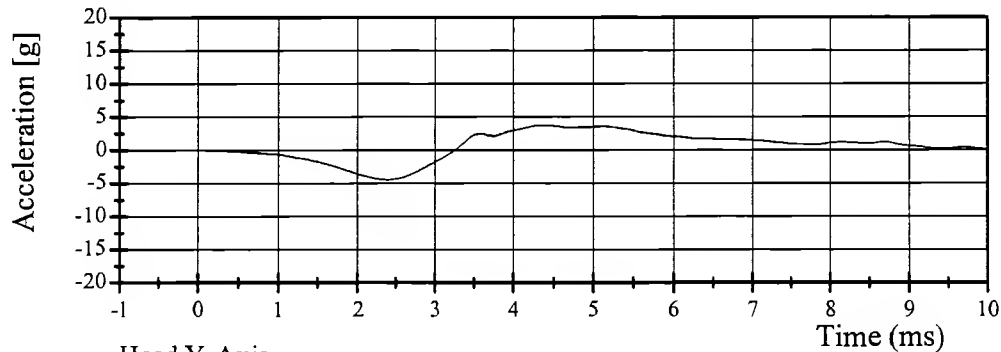
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 05 - 4

Test Date 02/11/2004

Head X-Axis

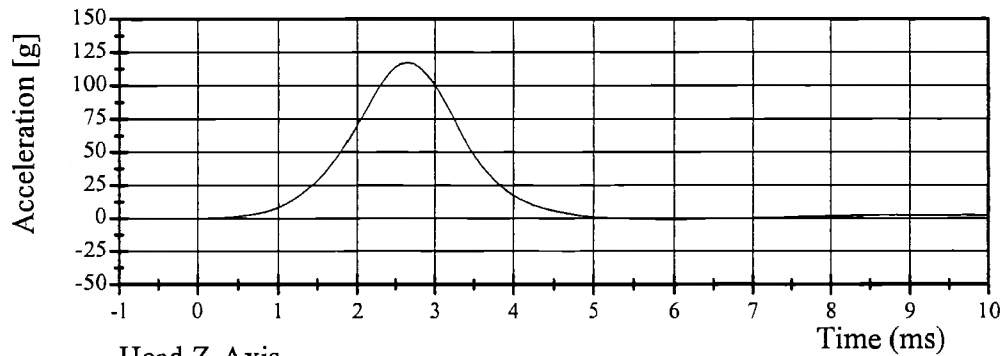


Filter Class: 1000

Max: 3.8 g at 4.4 ms

Min: -4.5 g at 2.4 ms

Head Y-Axis

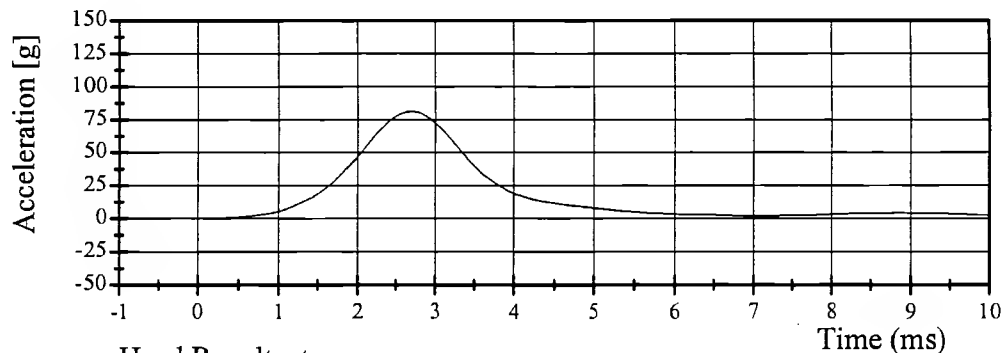


Filter Class: 1000

Max: 117.4 g at 2.6 ms

Min: -0.9 g at 5.9 ms

Head Z-Axis

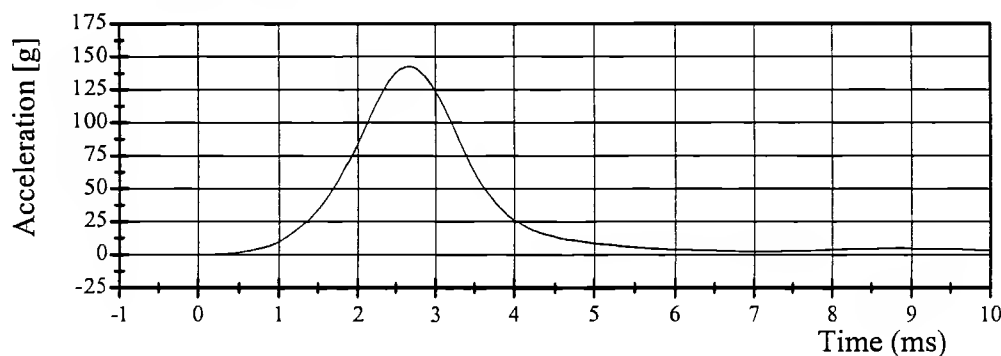


Filter Class: 1000

Max: 81.5 g at 2.7 ms

Min: 0.0 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 142.8 g at 2.6 ms

Min: 0.0 g at 8.3 ms

02.12.2004 09:04:13 607



Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.36 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.67 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.69 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.17 - 7.29 m/s	Yes
Peak D Plane Rotation	66 - 82 °	76.4 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	60.2 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	83.6 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	59.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	13.6 ms	Yes

Comments:

Technician



Approved



02.11.2004 14:00:52 517



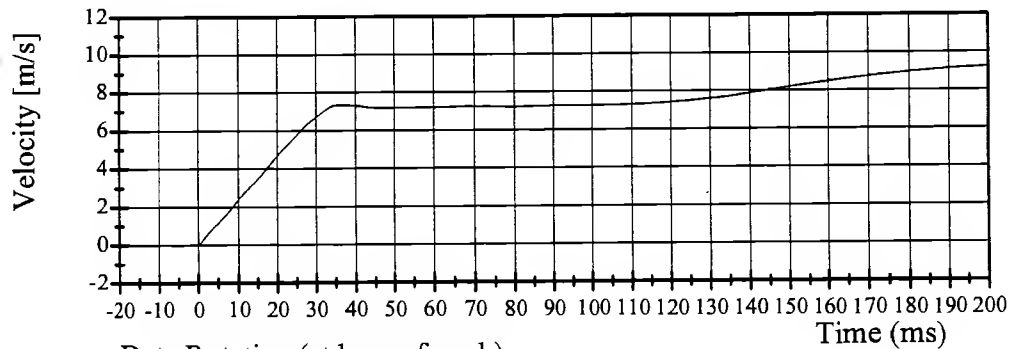
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Integrated Pendulum Velocity

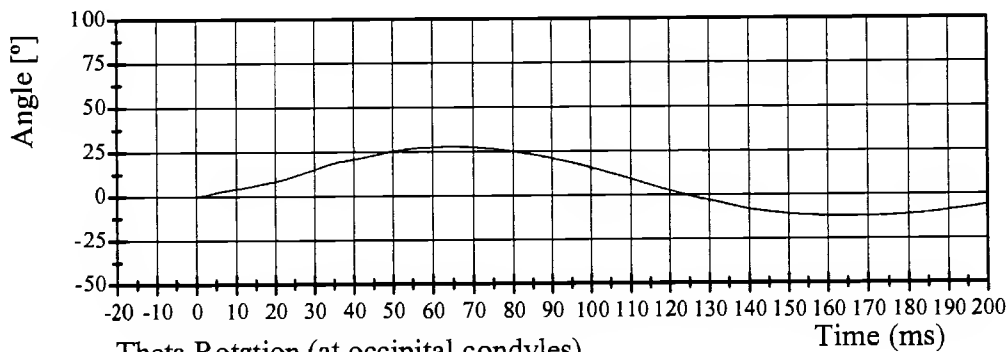


Filter Class: 180

Max: 9.6 m/s at 958.6 ms

Min: -0.0 m/s at -0.7 ms

Beta Rotation (at base of neck)

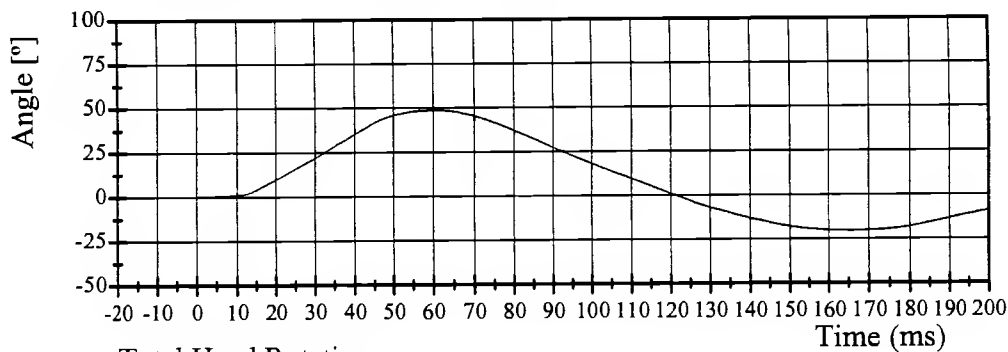


Filter Class: 60

Max: 27.9° at 64.3 ms

Min: -12.3° at 165.4 ms

Theta Rotation (at occipital condyles)

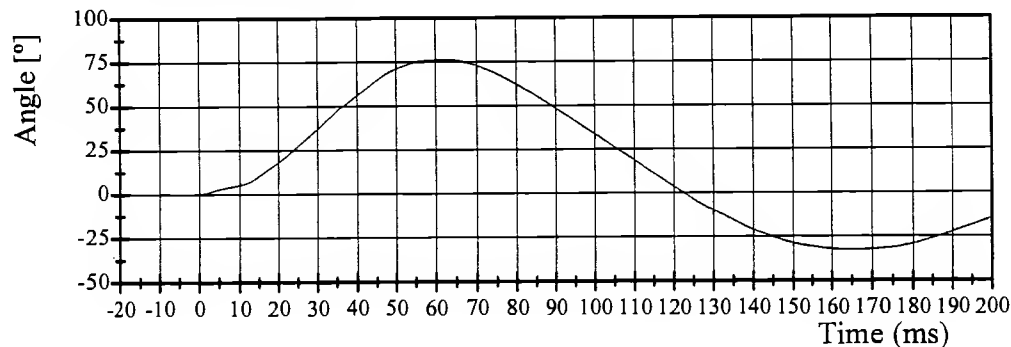


Filter Class: 60

Max: 48.6° at 61.0 ms

Min: -20.3° at 165.5 ms

Total Head Rotation



Filter Class: 60

Max: 76.4° at 62.3 ms

Min: -32.7° at 165.5 ms

02.11.2004 14:00:53 517



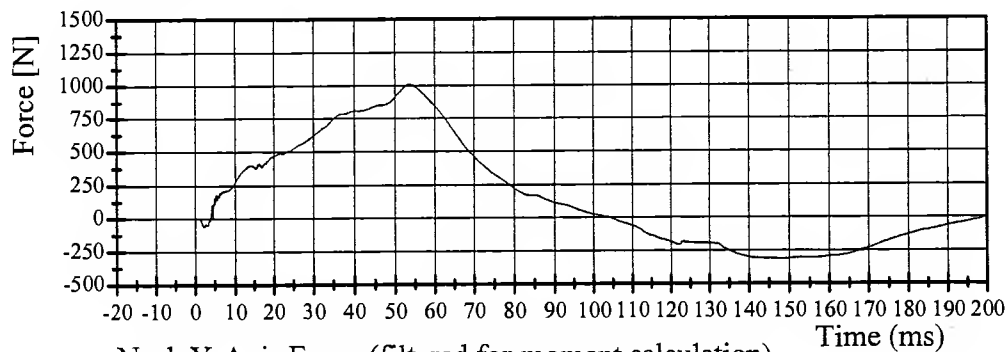
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Neck Y-Axis Force

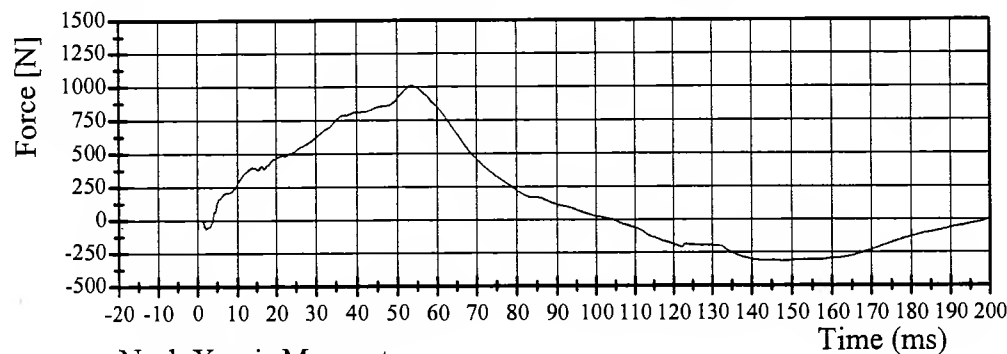


Filter Class: CFC 1000

Max: 1006 N at 53.3 ms

Min: -315 N at 148.3 ms

Neck Y-Axis Force (filtered for moment calculation)

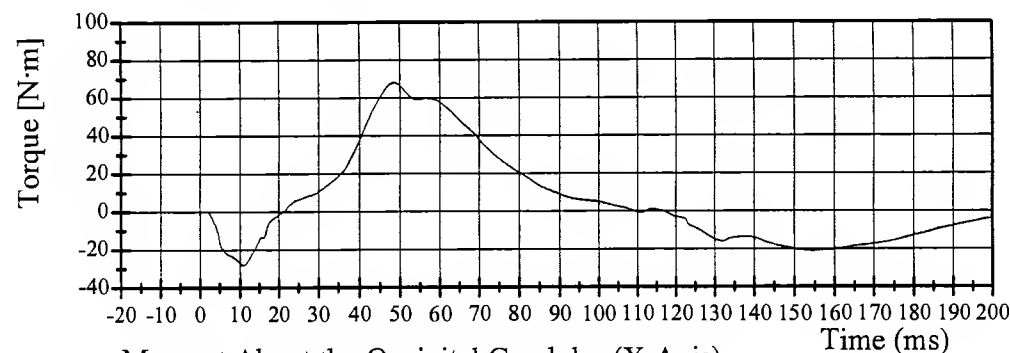


Filter Class: CFC 600

Max: 1006 N·m at 53.5 ms

Min: -314 N·m at 148.2 ms

Neck X-axis Moment

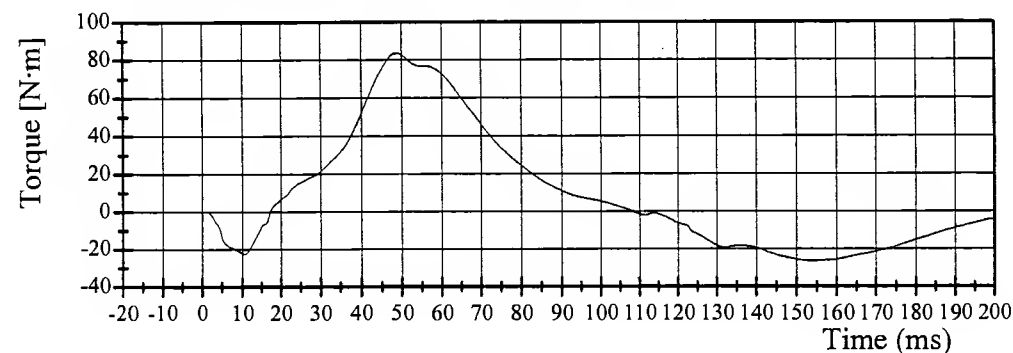


Filter Class: CFC 600

Max: 68.1 N·m at 48.5 ms

Min: -28.0 N·m at 11.0 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 83.6 ° at 48.7 ms

Min: -26.4 ° at 153.9 ms

02.11.2004 14:00:54 517



TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

11-SEP-03

TRC INC.

572F SN059 DAMPER TEST CAL01

TEST NUMBERS: DP05901A,DP05901B,DP05901C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	65.0 %
VELOCITY	FORCE	667 - 925 N	749 N
2.75 M/S	DISPLACEMENT	29.7 - 34.5 MM	29.9 MM
VELOCITY	FORCE	1733 - 2100 N	1802 N
4.26 M/S	DISPLACEMENT	31.6 - 37.2 MM	32.7 MM
VELOCITY	FORCE	3703 - 4402 N	3922 N
6.07 M/S	DISPLACEMENT	33.3 - 39.5 MM	35.9 MM

DAMPER SETTING = 5.5

TEST MEETS SPECIFICATIONS

TECHNICIAN 

RUN NUMBER: 091503.1343;2

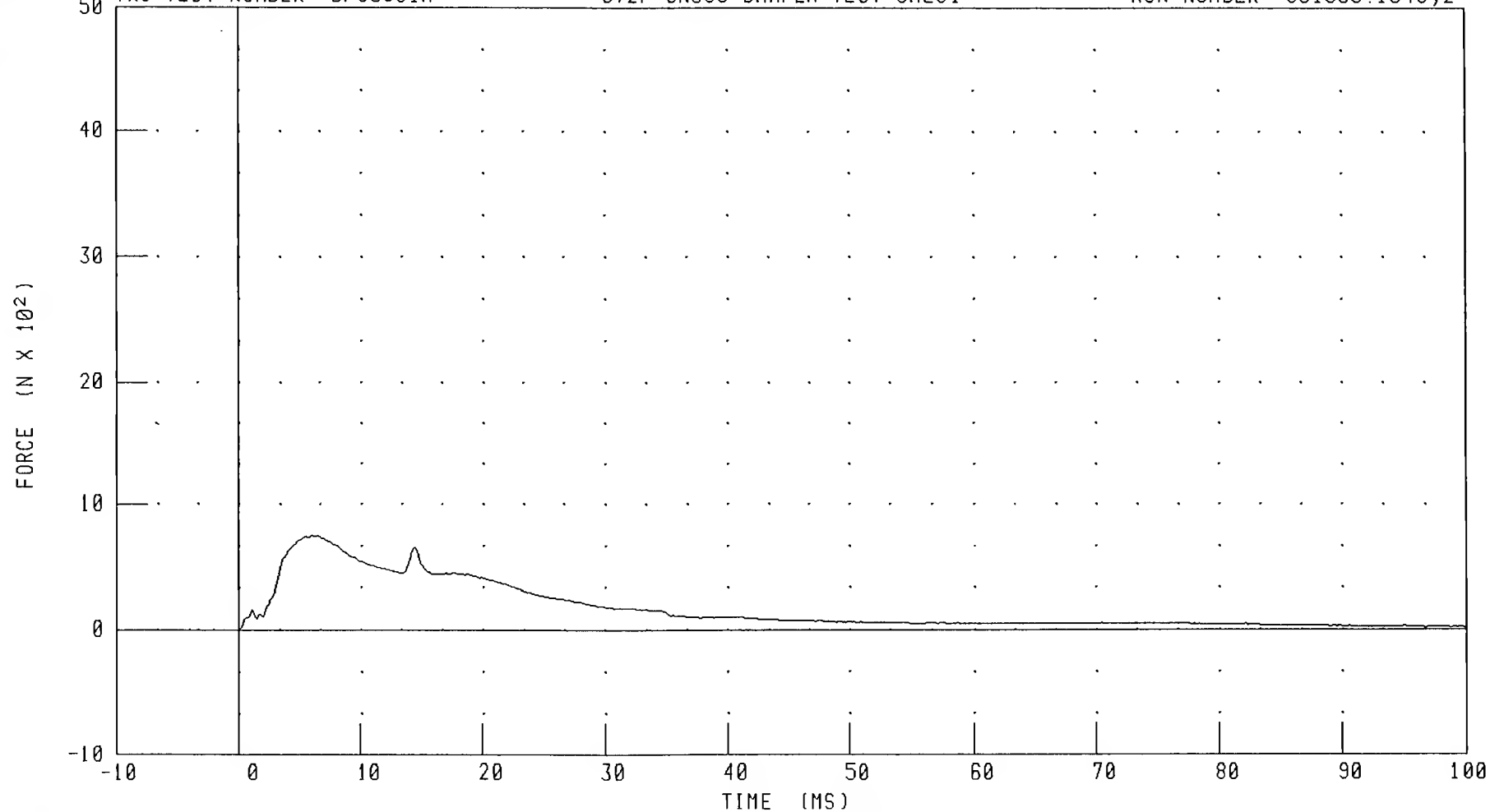
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05901A

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 748.99 N @ 6.00 MS; -2.13 N @ -9.04 MS

040218

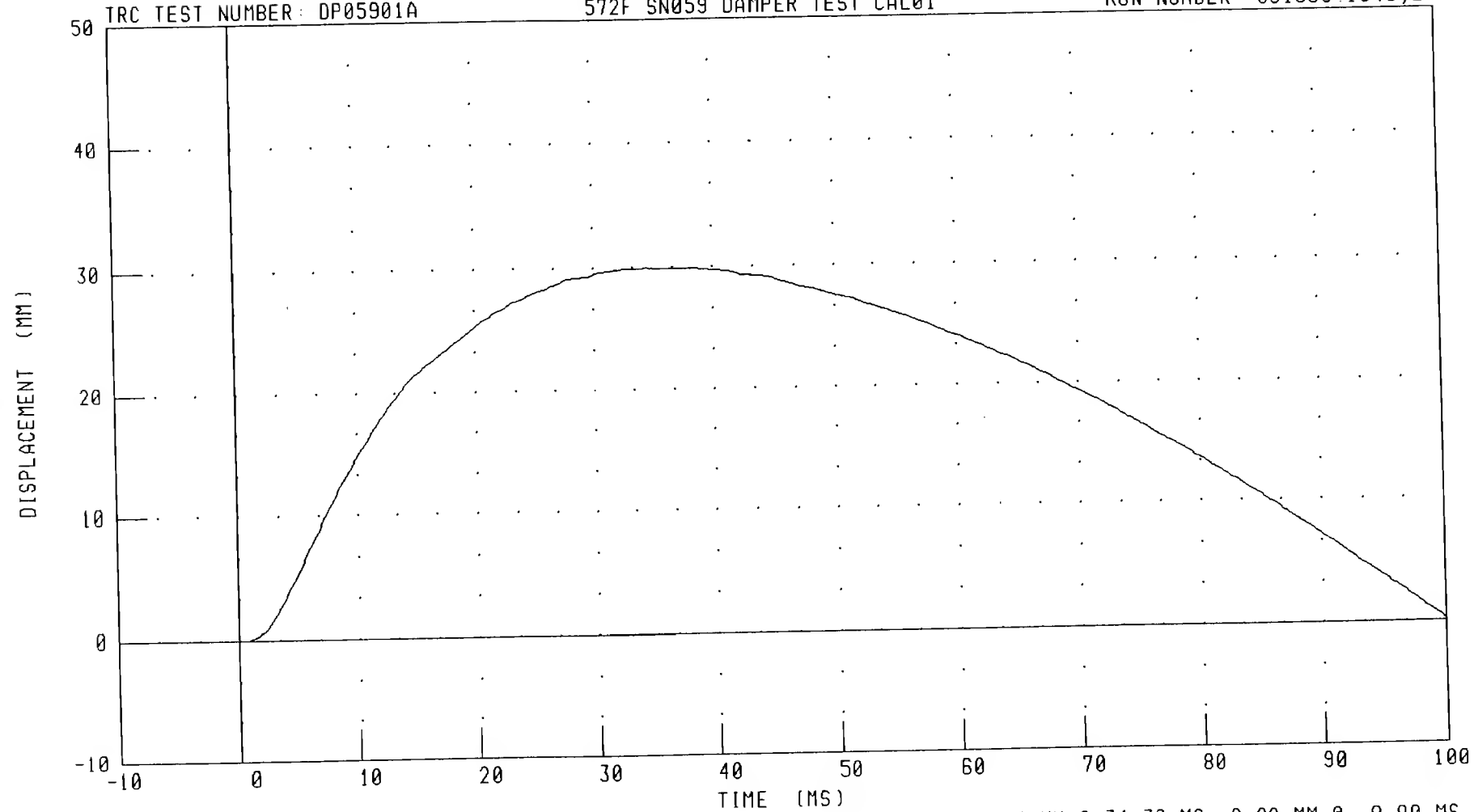
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2

TRC TEST NUMBER: DP05901A



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 29.92 MM @ 34.32 MS; 0.00 MM @ -8.80 MS

040218

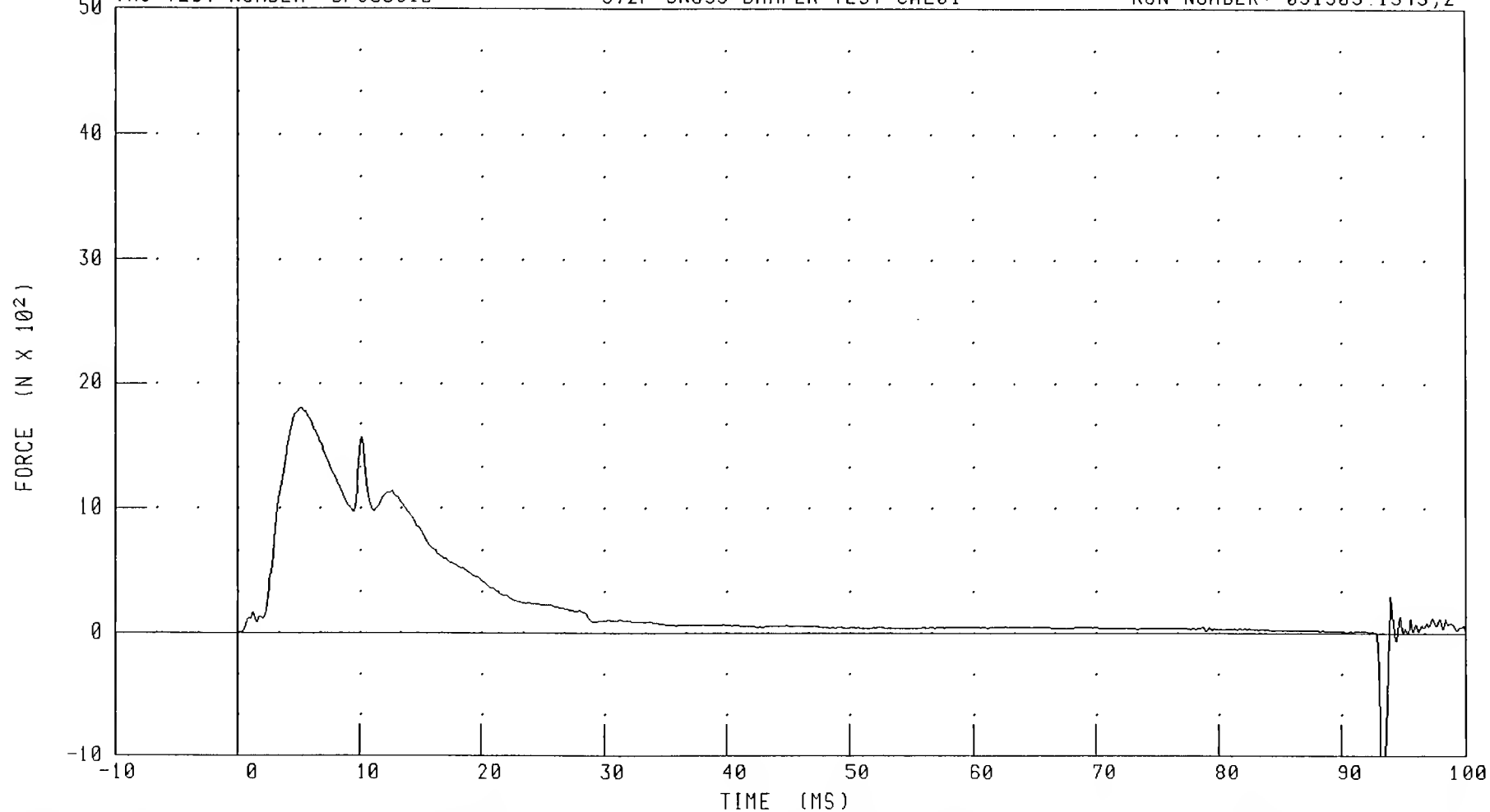
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05901B

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 1801.64 N @ 5.12 MS; -1917.29 N @ 93.36 MS

C-13

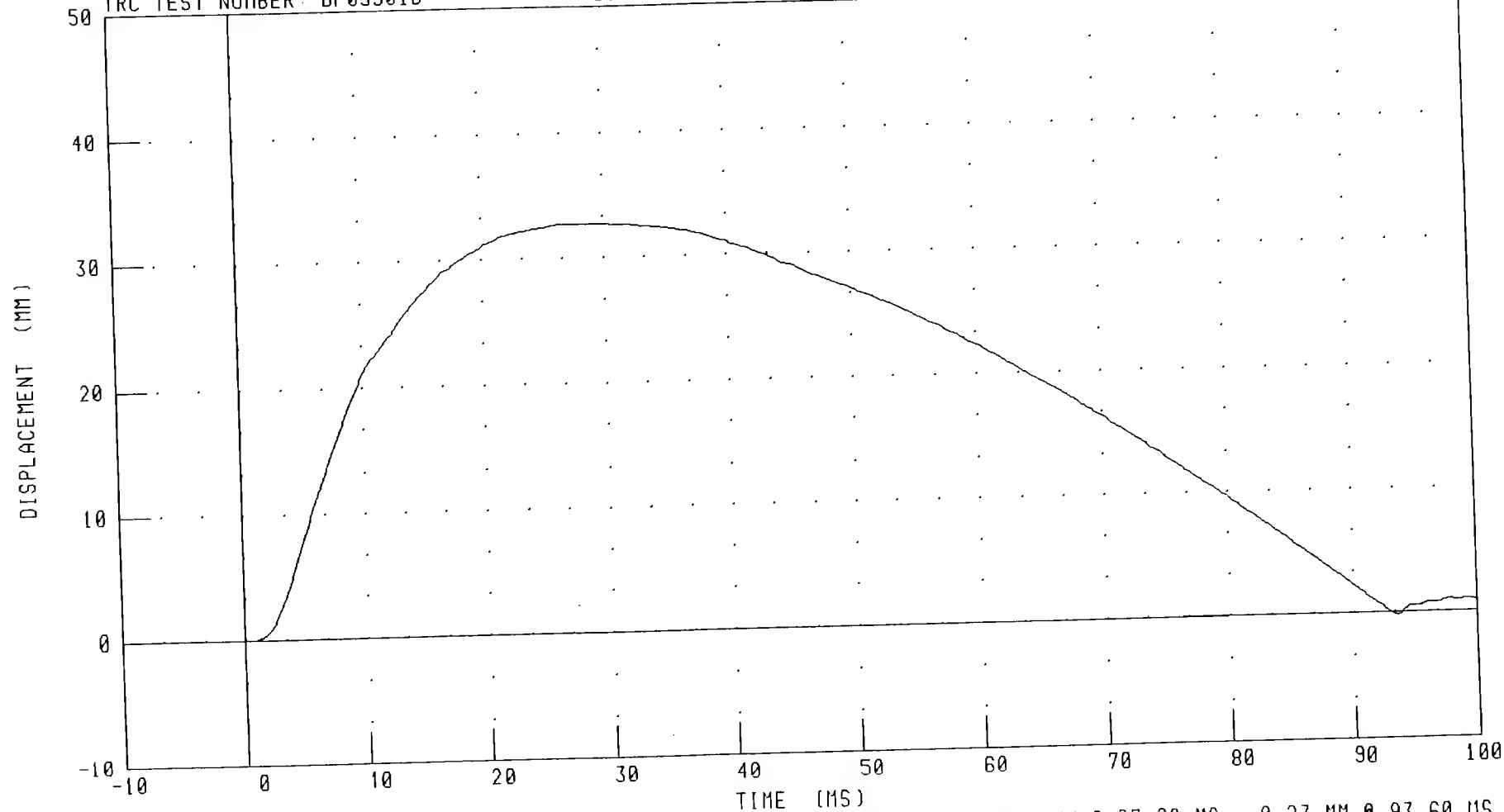
040218

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT
572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2

TRC TEST NUMBER: DP05901B



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 32.68 MM @ 27.68 MS; -0.23 MM @ 93.60 MS

C-14

040218

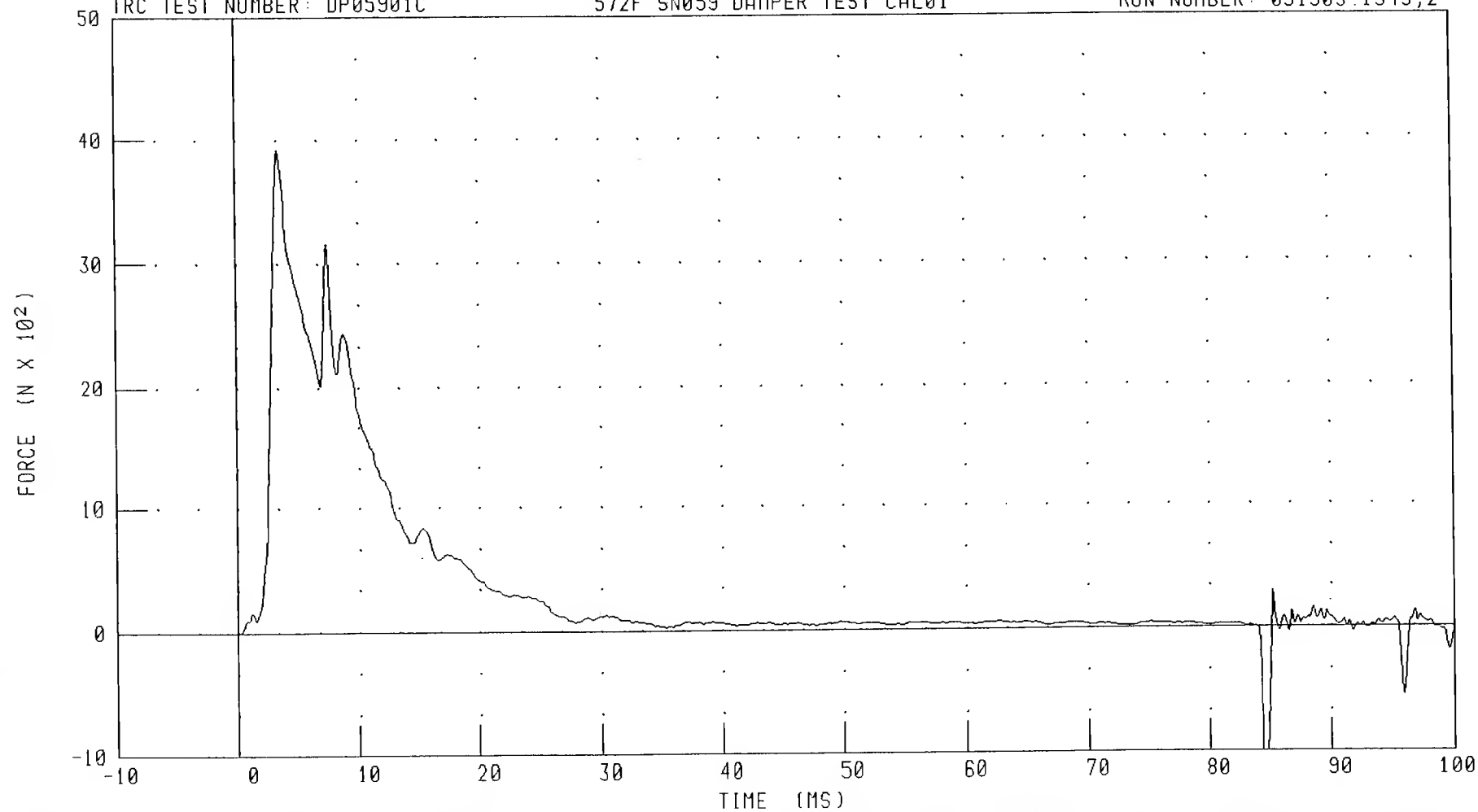
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05901C

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 3922.19 N @ 3.44 MS; -2043.18 N @ 84.64 MS

040218

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2

TRC TEST NUMBER: DP05901C



CHANNEL: CSTYD FILTER: CH CLASS 1000

PEAK DATA: 35.88 MM @ 26.08 MS; -0.25 MM @ 84.88 MS

040218

Transportation Research Center Inc.

572B Abdomen Compression Test

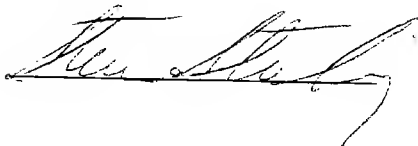
SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	6.5 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician



Approved



02.09.2004 17:03:37 1806

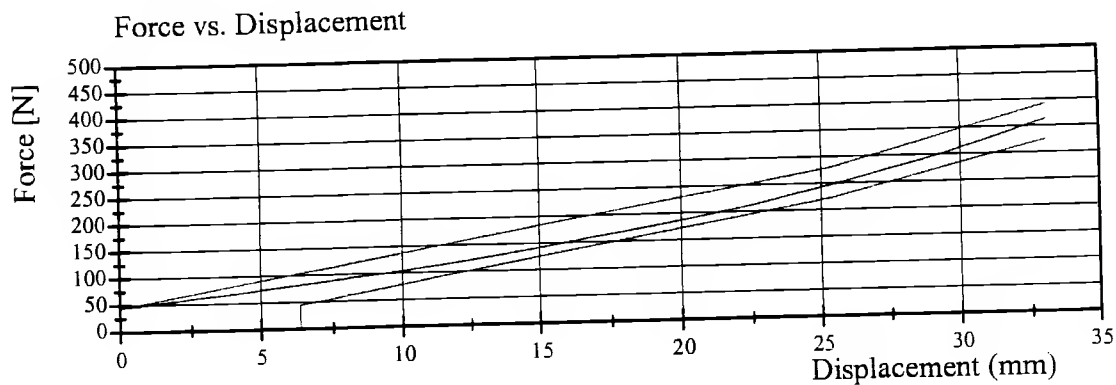
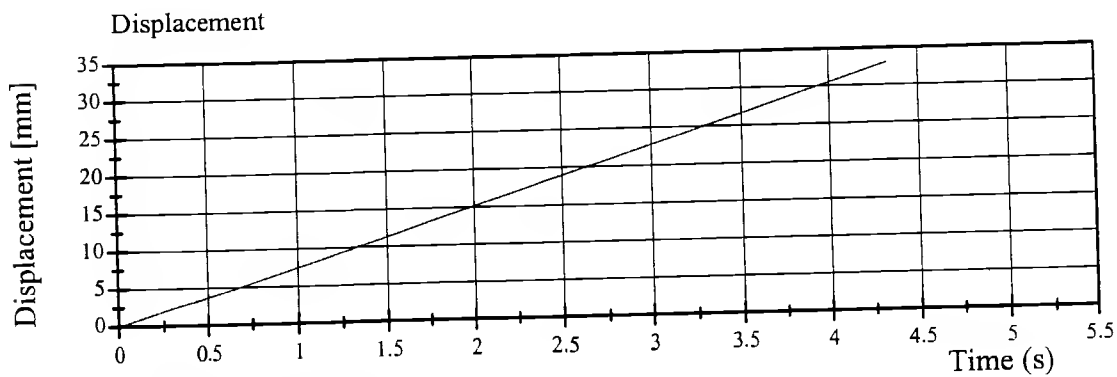
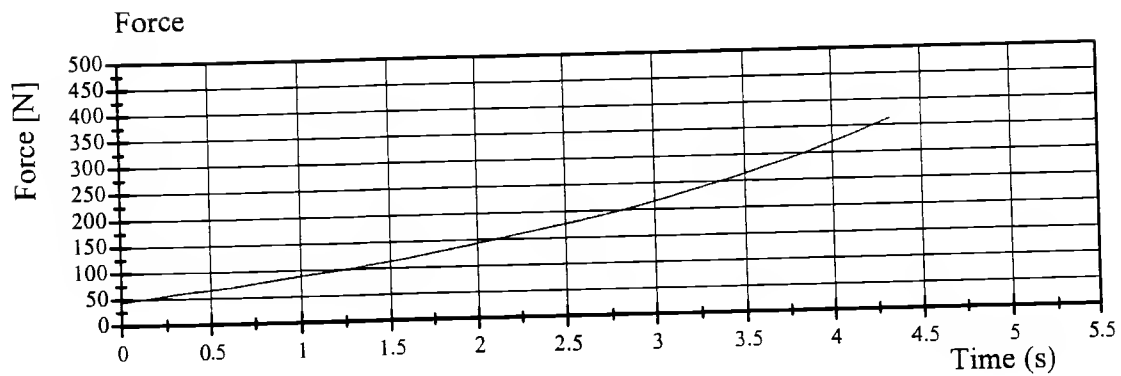


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/09/2004



02.09.2004 17:03:38 1806



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID HIII

CAL DATE: 11-Feb-04

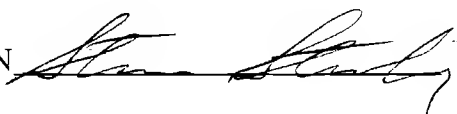
TRC, INC. TEST NO: LF05905-3

572M SN 059 TORSO FLEX CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.3 °C
RELATIVE HUMIDITY	10 – 70 %	26 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	137.9 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	195.7 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	258.0 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	2.8 °

TEST MEETS SPECIFICATIONS

TECHNICIAN



Transportation Research Center Inc.

572F Left Thorax Test

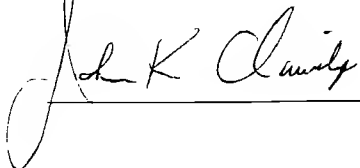
SID HIII Serial No. 059 Calibration No. 05 - 4

Test Date 02/12/2004

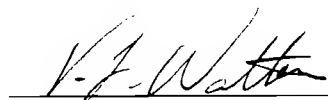
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.1 C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.27 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	43.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	41.1 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	21.6 g	Yes

Comments:

Technician



Approved



02.12.2004 15:56:41 1145



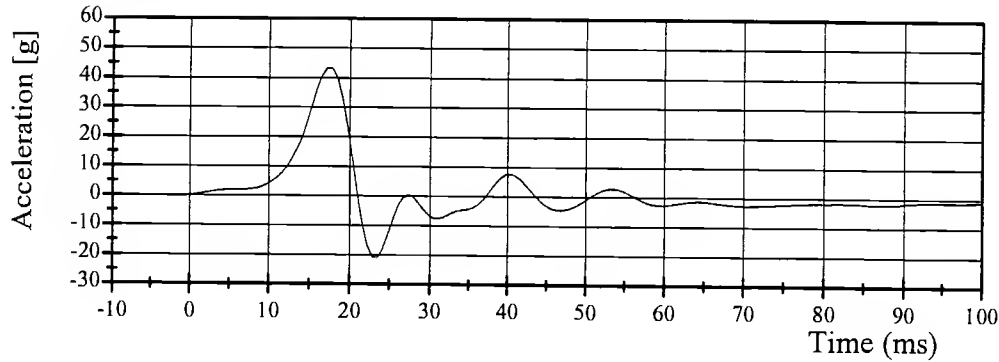
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 05 - 4

Test Date 02/12/2004

Upper Rib Bar Acceleration

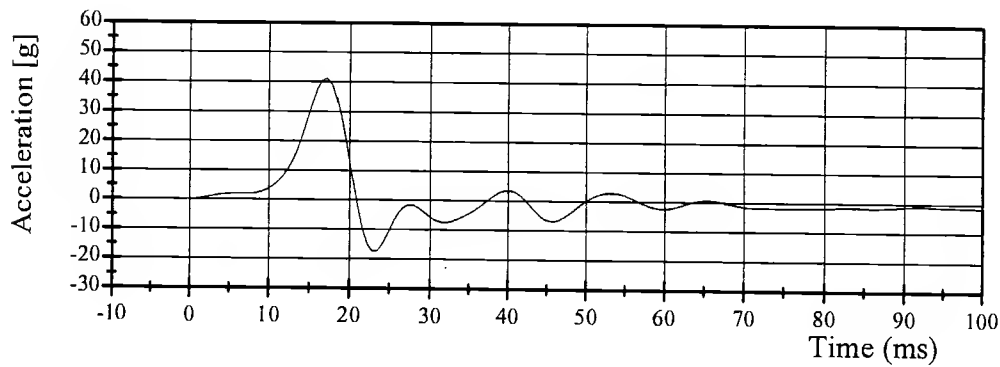


Filter Class: FIR 100

Max: 43.3 g at 17.3 ms

Min: -21.0 g at 23.4 ms

Lower Rib Bar Acceleration

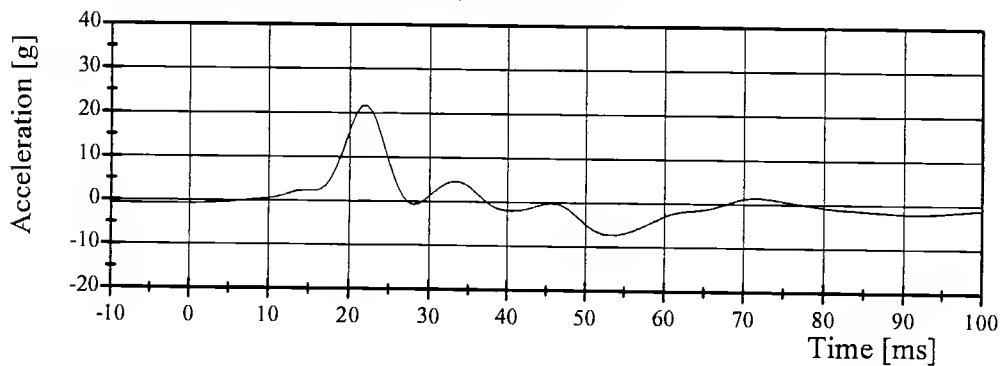


Filter Class: FIR 100

Max: 41.1 g at 17.2 ms

Min: -17.3 g at 22.9 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 21.6 g at 22.2 ms

Min: -7.3 g at 53.4 ms

02.12.2004 15:56:42 1145





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

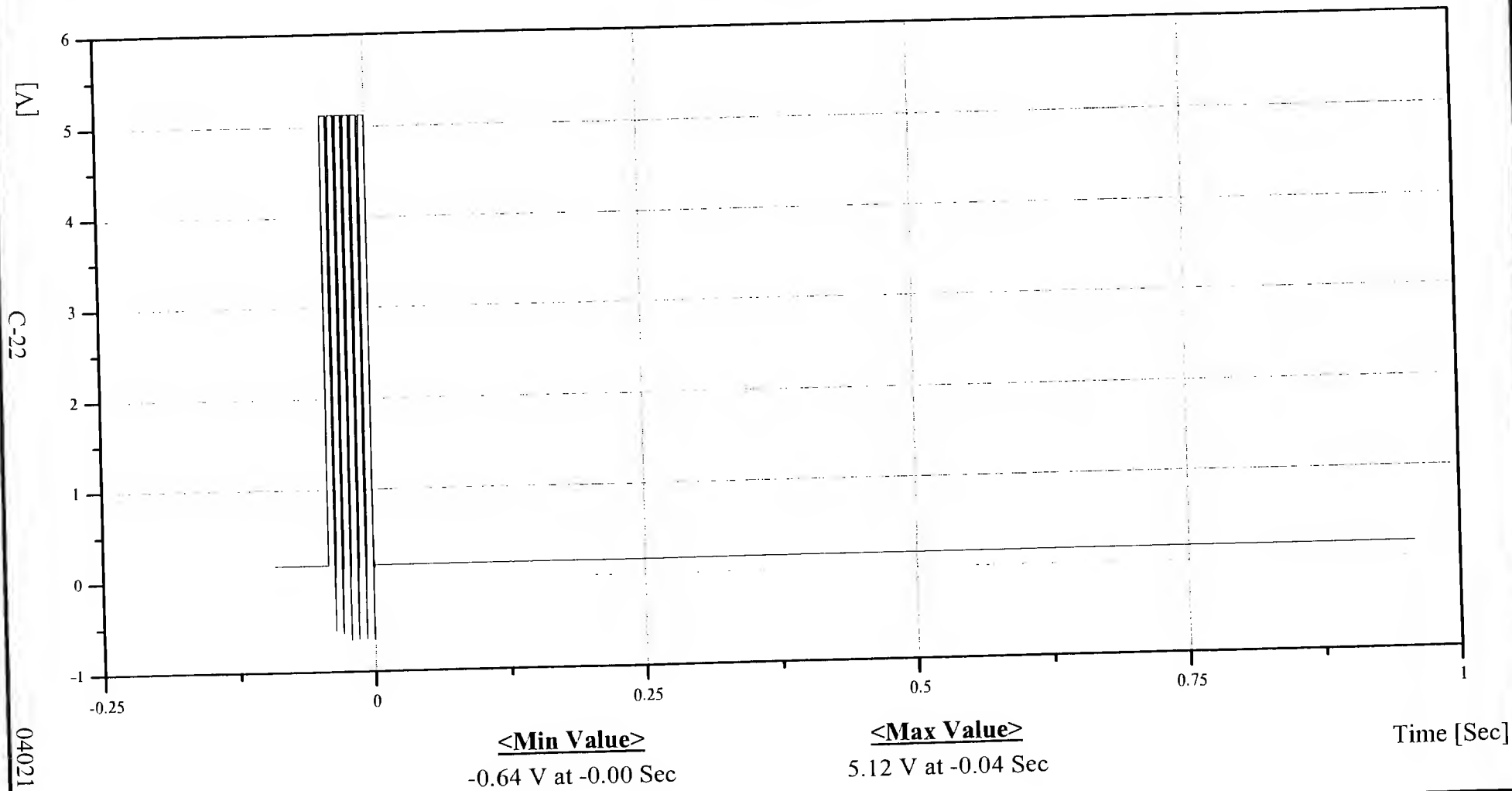
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

PENXV





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

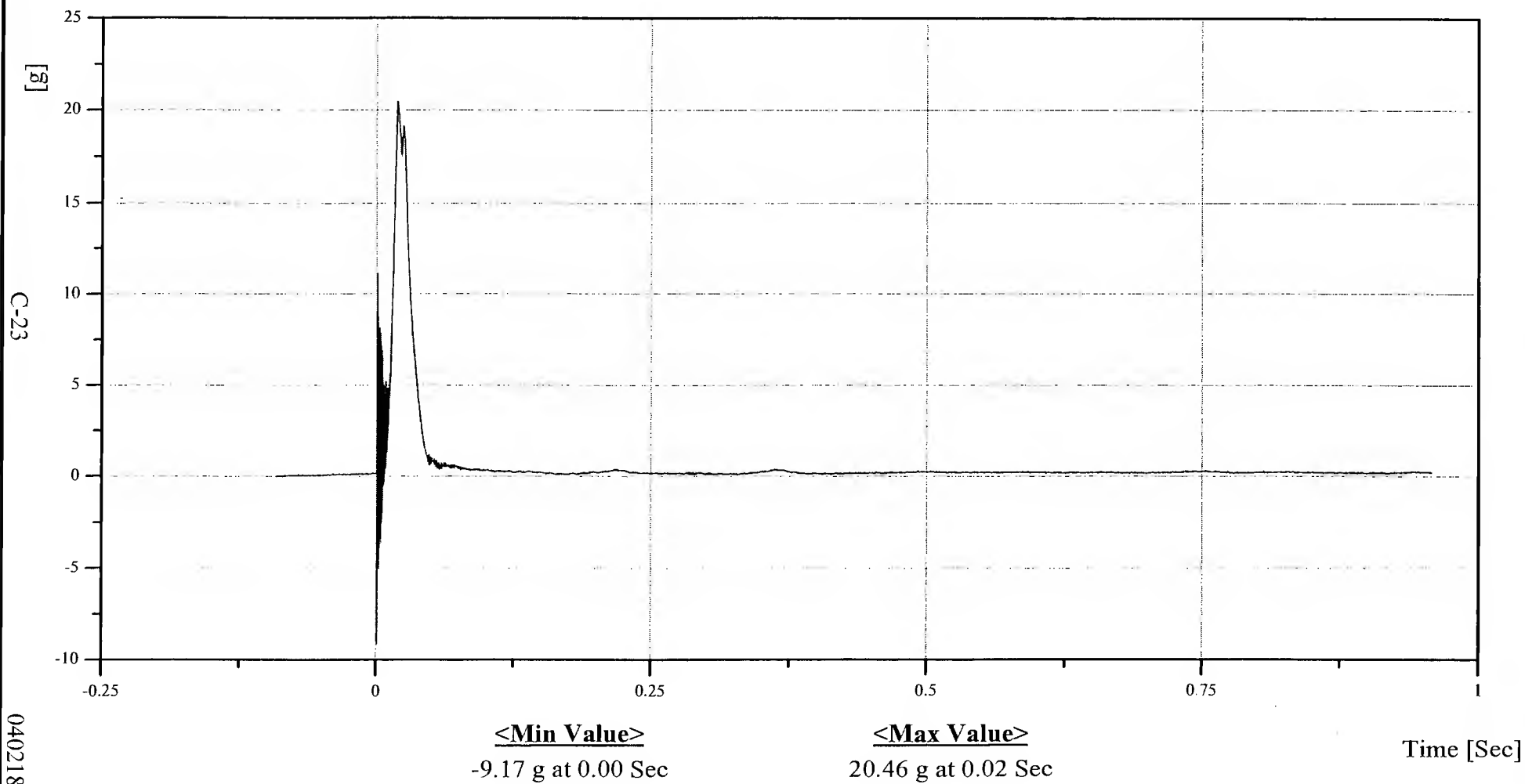
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

PENXG





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

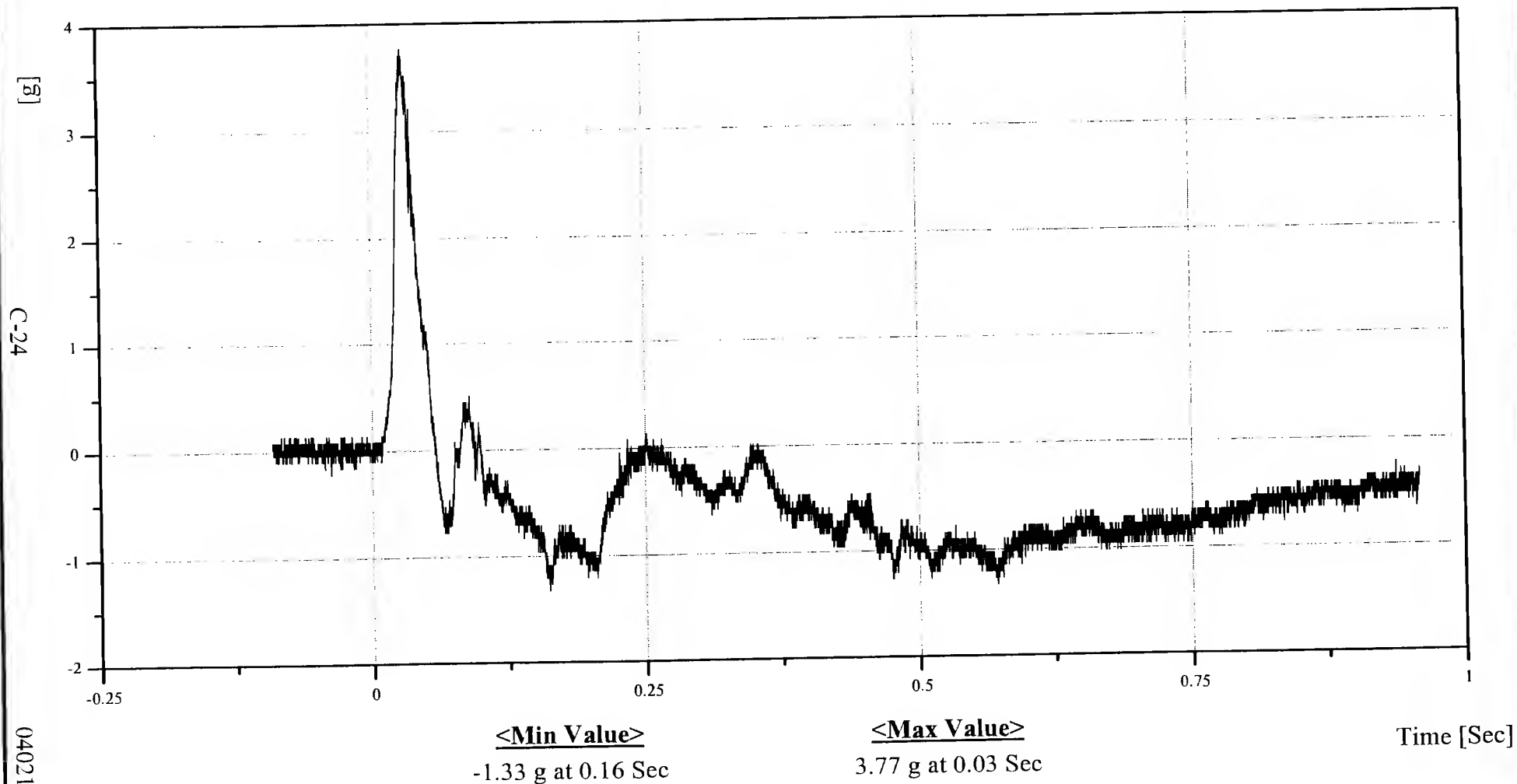
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

PEVYG





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

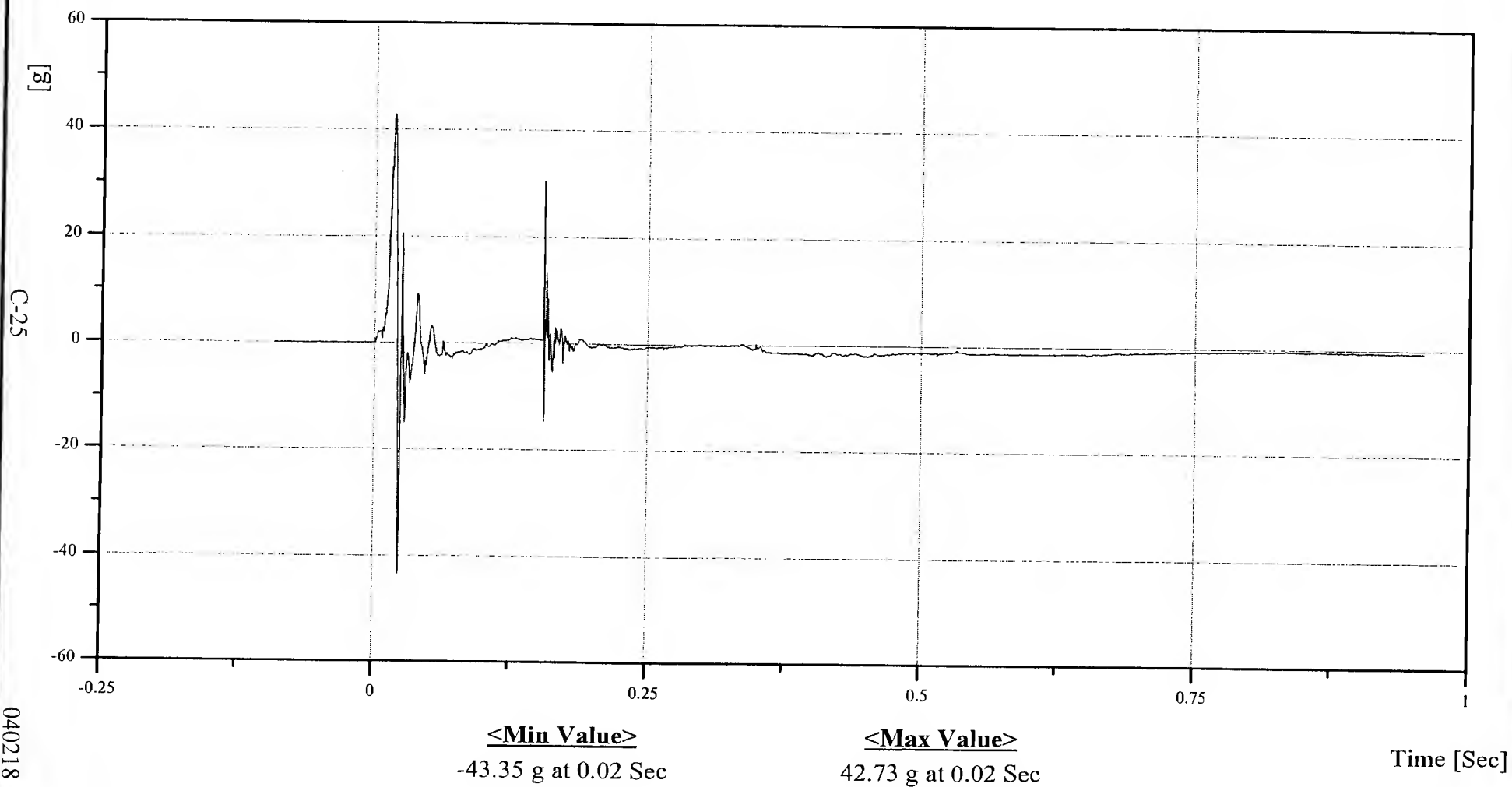
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

URYG





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

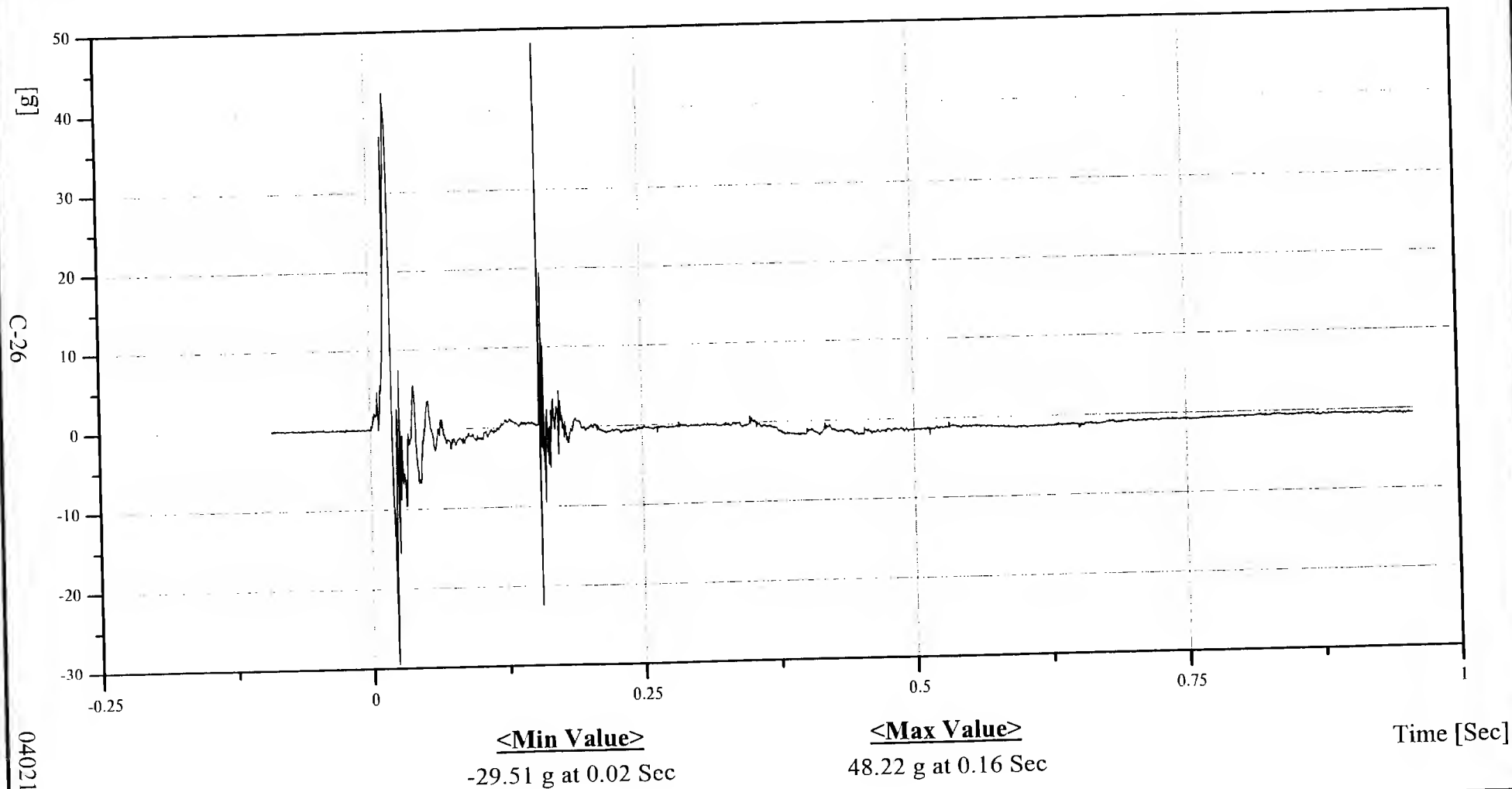
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

LRYG





Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004

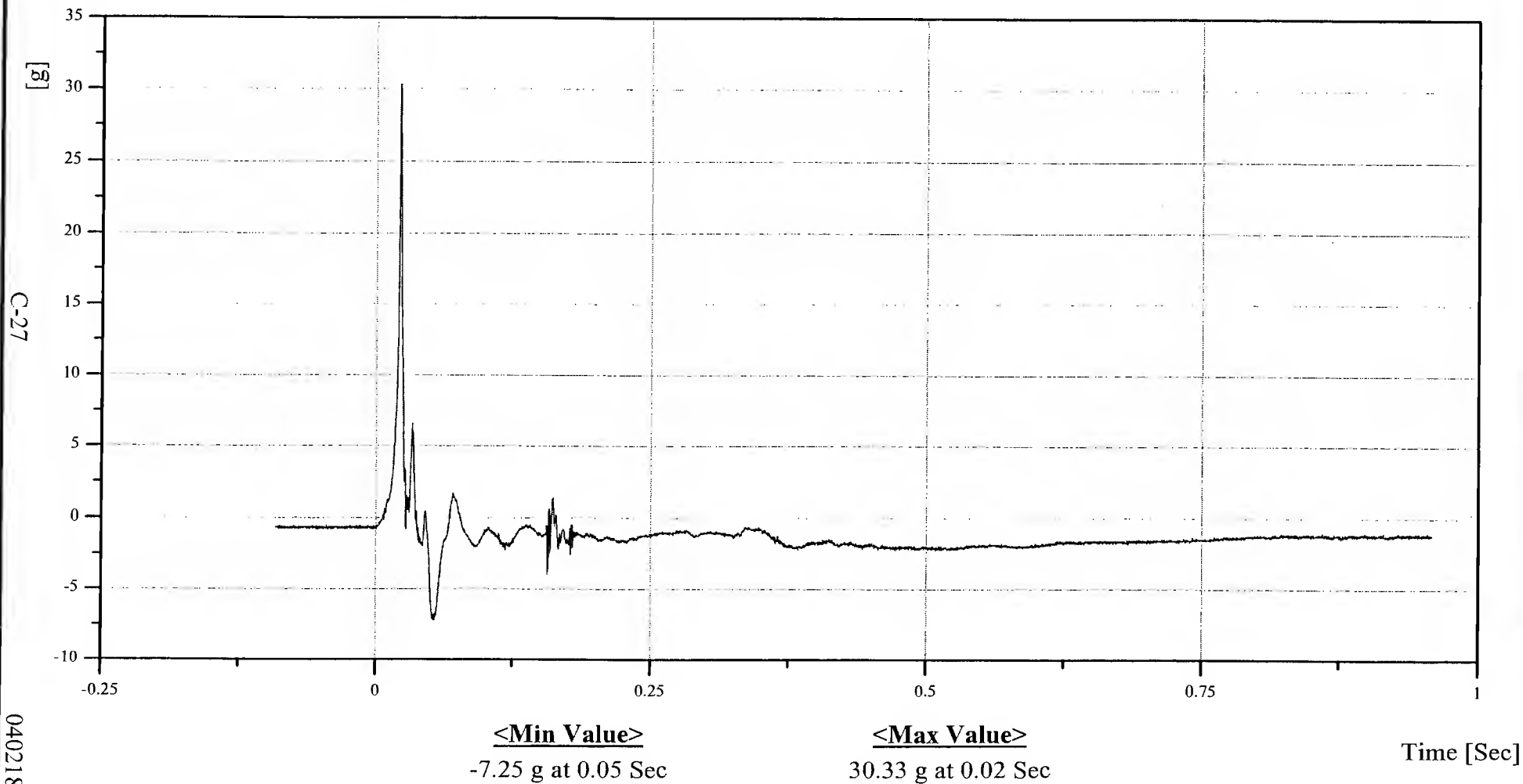
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

T12YG



Transportation Research Center Inc.

572F Left Pelvis Test

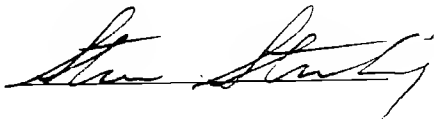
SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/11/2004

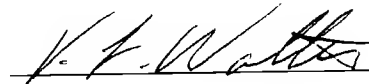
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.9 C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.27 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	45.9 g	Yes
Time Above 20 g	3 - 7 ms	6.00 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.11.2004 18:01:12 1172

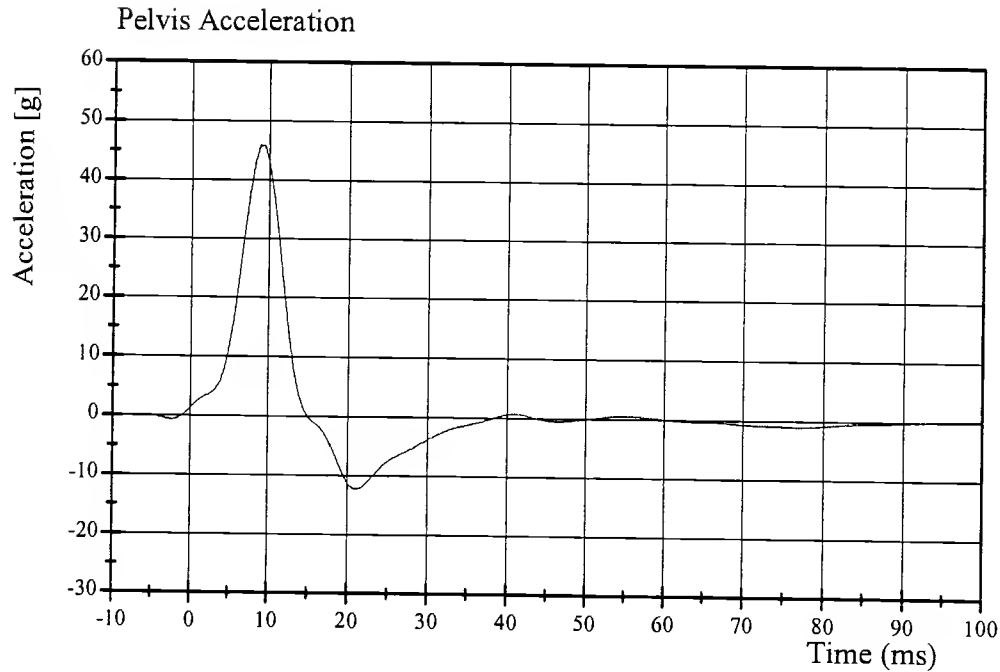


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/11/2004



Filter Class: FIR 100

Max: 45.9 g at 8.9 ms

Min: -12.2 g at 21.3 ms

02.11.2004 18:01:13 1172



Calibration Test Results

Pre-Test

SID HIII: 906

Configured for Left Side Impact

External Dimensions:	External dimensions were not recorded pre-test.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was tested on September 12, 2003 for a previous calibration series.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	23 %	Yes
Peak Resultant Acceleration	120 - 150 g	128.7 g	Yes
Peak Longitudinal Acceleration	15 g Max	6.2 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 12:39:33 610

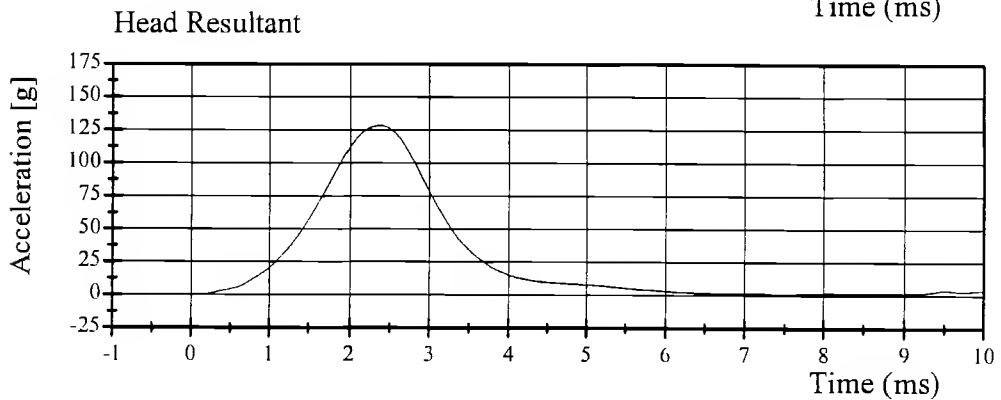
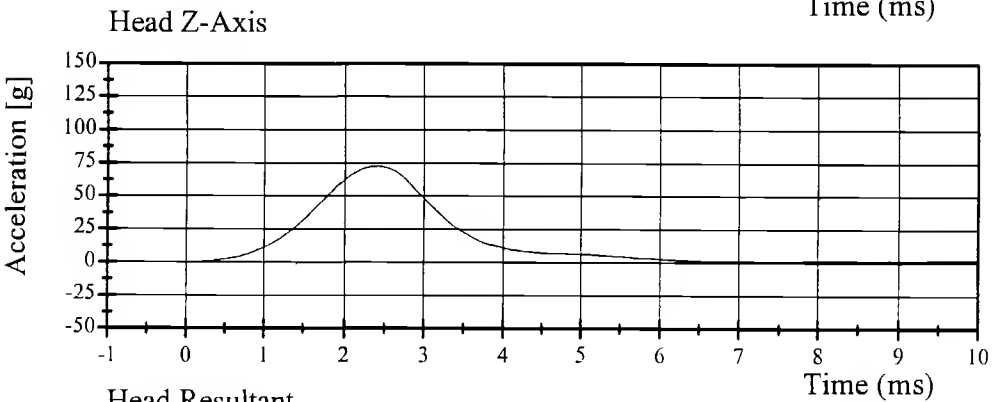
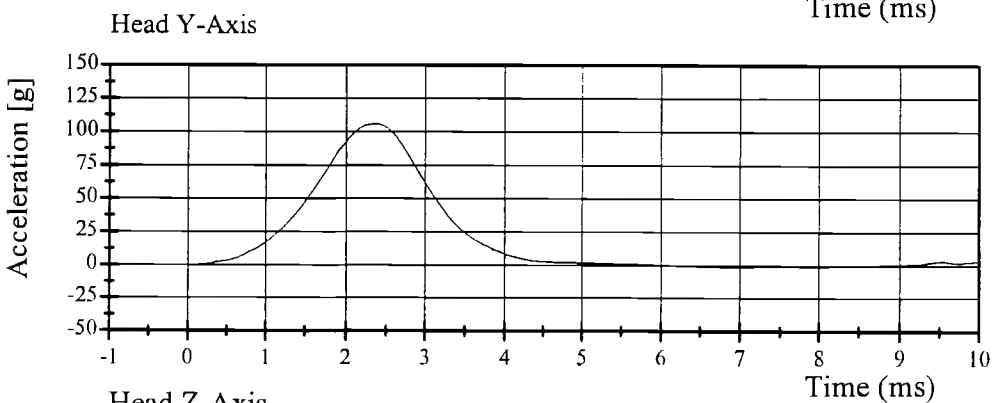
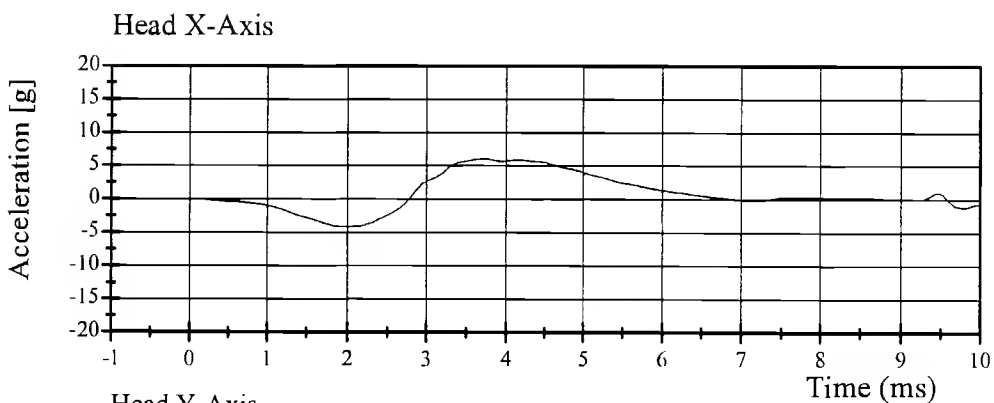


Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004



02.17.2004 12:39:34 610



Transportation Research Center Inc.

572M Left Lateral Neck Test

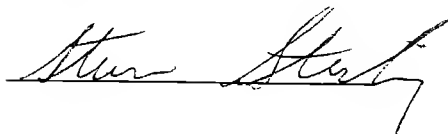
SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

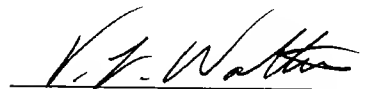
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	24 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.18 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.37 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.21 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.20 - 7.33 m/s	Yes
Peak D Plane Rotation	66 - 82 °	71.6 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	60.2 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	73.4 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	55.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	8.3 ms	Yes

Comments:

Technician



Approved



02.17.2004 15:37:43 515

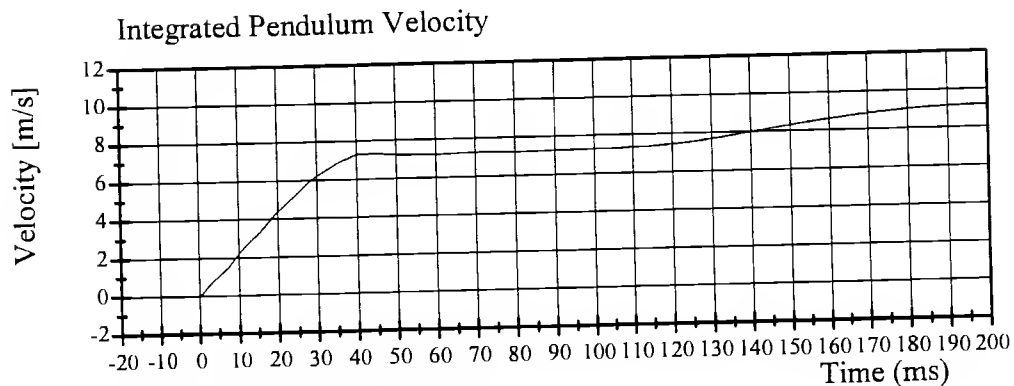


Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 06 - 1

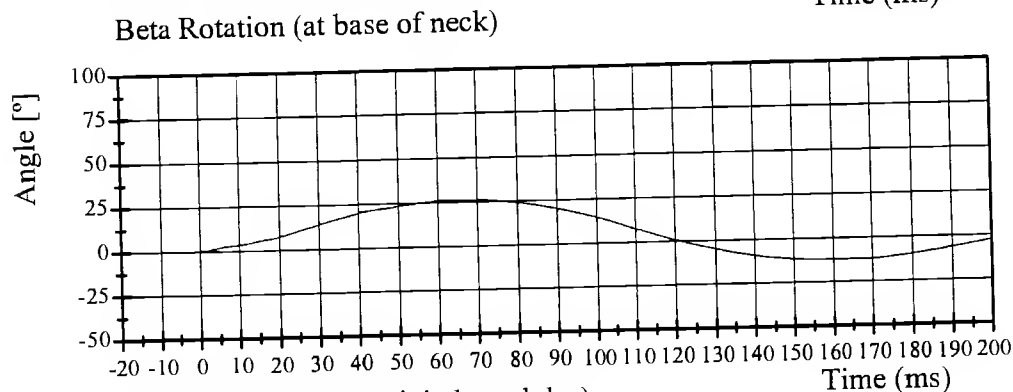
Test Date 02/17/2004



Filter Class: 180

Max: 9.5 m/s at 958.8 ms

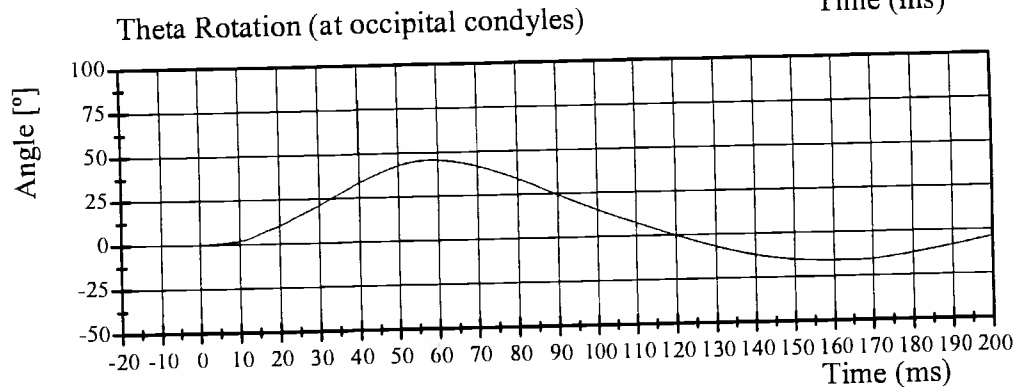
Min: -0.0 m/s at -0.7 ms



Filter Class: 60

Max: 26.2 ° at 63.7 ms

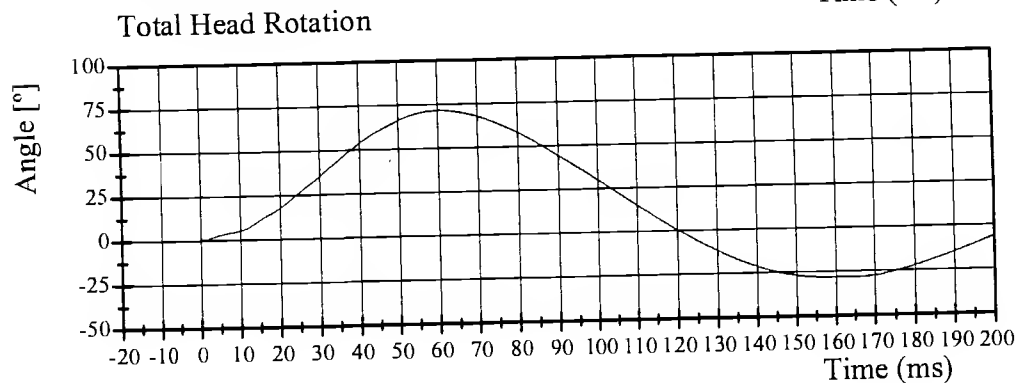
Min: -12.1 ° at 162.2 ms



Filter Class: 60

Max: 45.8 ° at 58.0 ms

Min: -16.1 ° at 159.3 ms



Filter Class: 60

Max: 71.6 ° at 60.2 ms

Min: -28.2 ° at 161.8 ms

02.17.2004 15:37:44 515



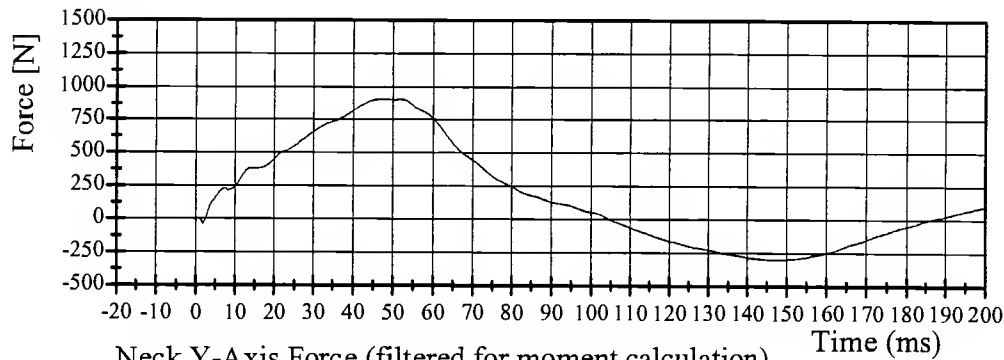
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Neck Y-Axis Force

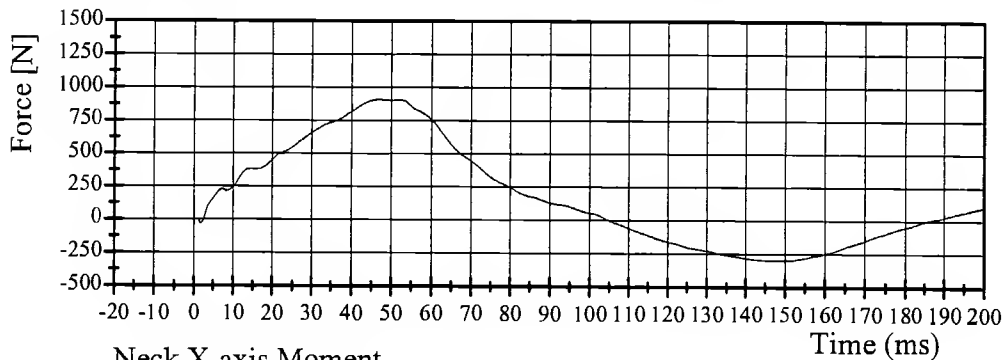


Filter Class: CFC 1000

Max: 909 N at 46.6 ms

Min: -298 N at 146.1 ms

Neck Y-Axis Force (filtered for moment calculation)

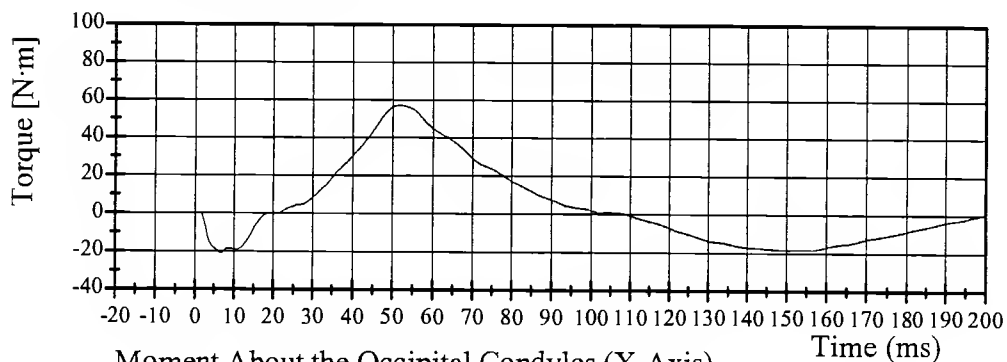


Filter Class: CFC 600

Max: 909 N·m at 46.6 ms

Min: -298 N·m at 146.1 ms

Neck X-axis Moment

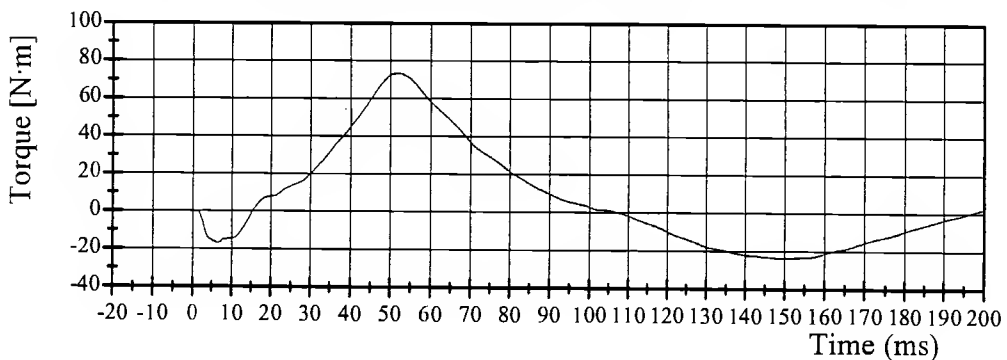


Filter Class: CFC 600

Max: 57.3 N·m at 51.8 ms

Min: -20.8 N·m at 6.6 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 73.4 ° at 51.8 ms

Min: -23.6 ° at 149.4 ms

02.17.2004 15:37:45 515



Transportation Research Center Inc.

572B Abdomen Compression Test

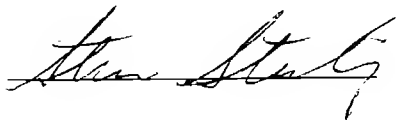
SID HIII Serial No. 906 Calibration No. 06 - 3

Test Date 02/16/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	21 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.4 - 7.9 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician



Approved



02.16.2004 16:03:51 1691

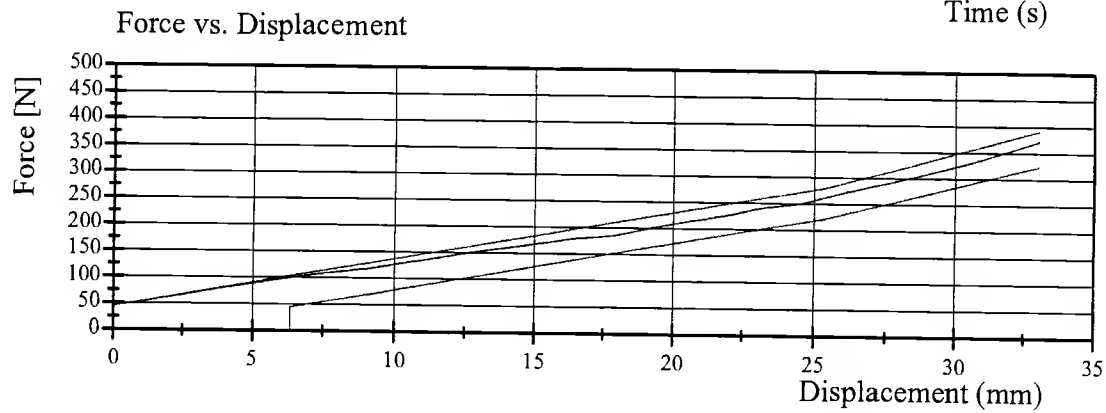
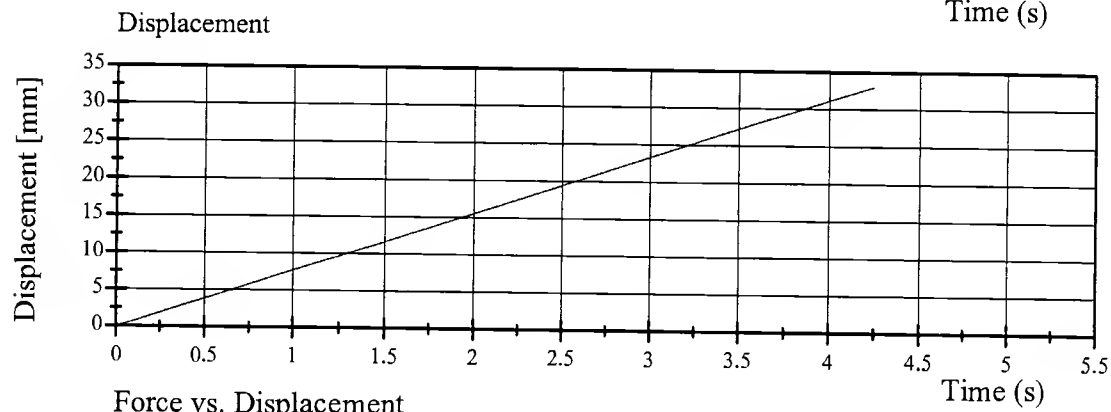
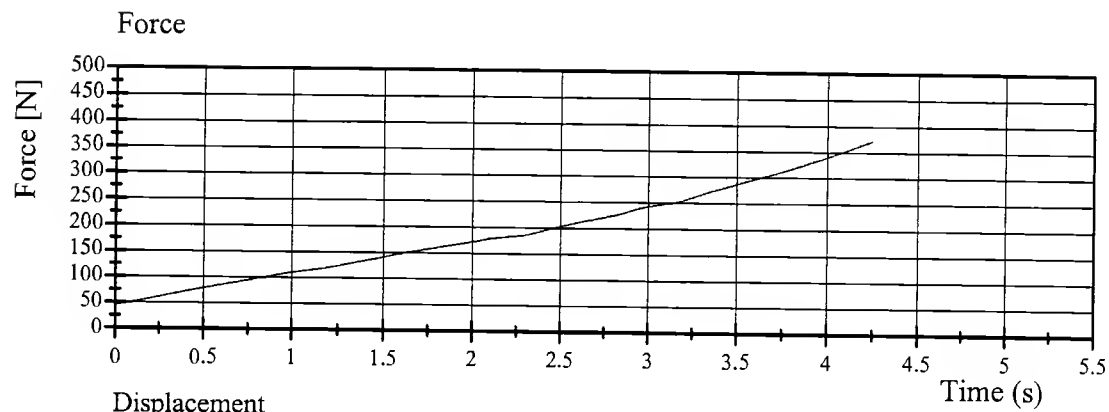


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 06 - 3

Test Date 02/16/2004



02.16.2004 16:03:52 1691



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID/HIII

CAL DATE: 17-Feb-04

TRC, INC. TEST NO: LF90606-3 572M SN 906 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6° C	21.1 °C
RELATIVE HUMIDITY	10 - 70 %	23 %
FORCE AT 0 DEG. FLEXION	-27 - 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 - 151 N	106.8 N
FORCE AT 30 DEG OF FLEXION	151 - 205 N	160.1 N
FORCE AT 40 DEG OF FLEXION	205 - 258 N	222.4 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	3 °

TEST MEETS SPECIFICATIONS

TECHNICIAN V. F. Walter

Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.8 C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.28 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	43.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	44.0 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	18.3 g	Yes

Comments:

Technician



Approved



02.17.2004 17:04:02 1149



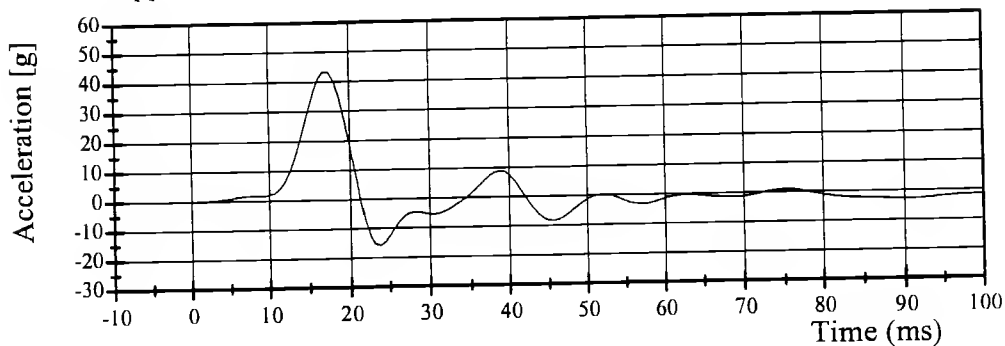
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Upper Rib Bar Acceleration

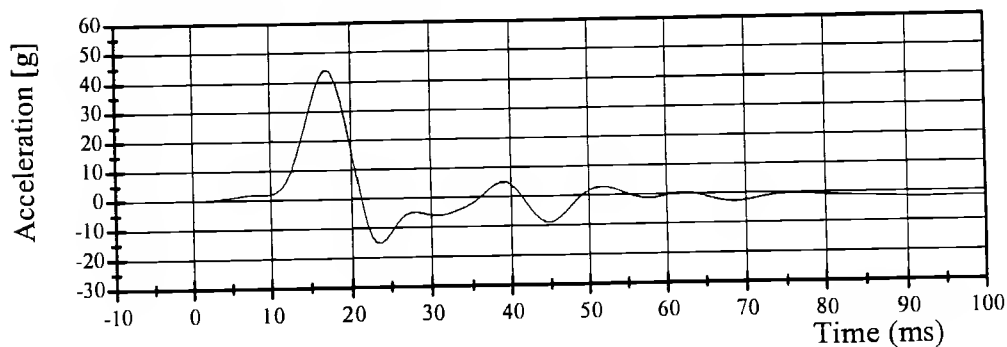


Filter Class: FIR 100

Max: 43.3 g at 17.0 ms

Min: -16.0 g at 23.8 ms

Lower Rib Bar Acceleration

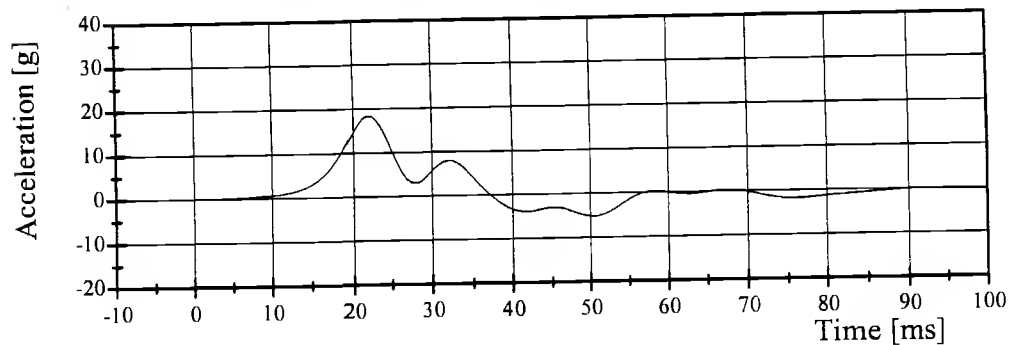


Filter Class: FIR 100

Max: 44.0 g at 17.0 ms

Min: -15.2 g at 23.8 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 18.3 g at 21.9 ms

Min: -5.2 g at 50.1 ms

02.17.2004 17:04:03 1149



Transportation Research Center Inc.

572F Left Pelvis Test

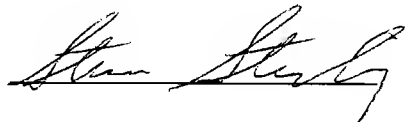
SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

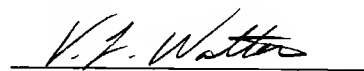
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.8 C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.28 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	53.3 g	Yes
Time Above 20 g	3 - 7 ms	5.76 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 16:53:15 1170

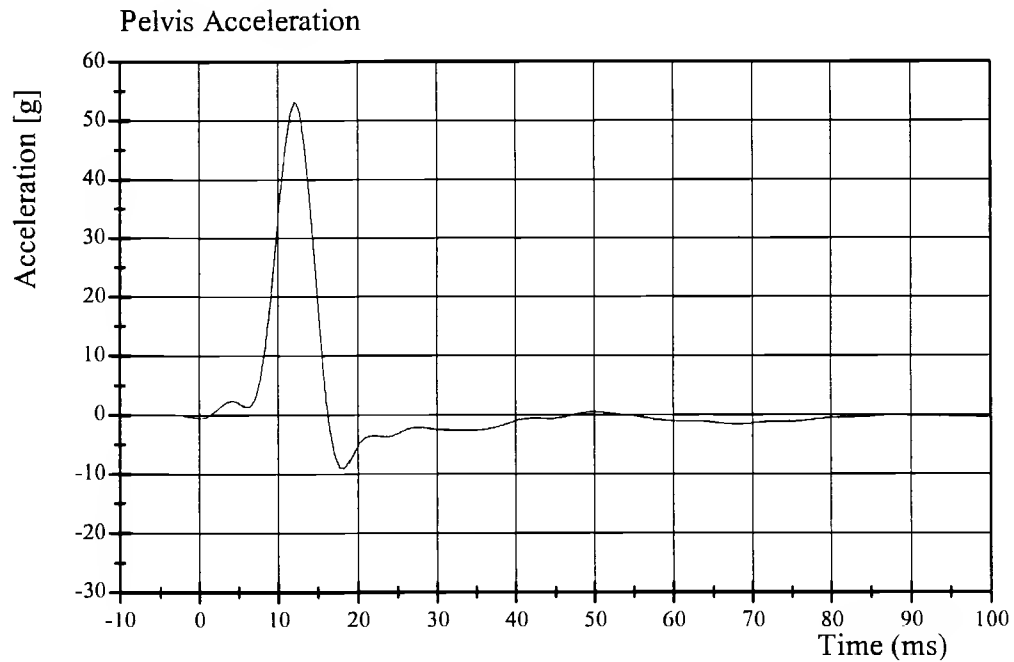


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004



Filter Class: FIR 100

Max: 53.3 g at 12.1 ms

Min: -9.0 g at 18.3 ms

02.17.2004 16:53:16 1170



Calibration Test Results

Post-Test

SID HIII: 059

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber did not pass all test requirements.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.
SID/HIII Dummy Post Test
External Dimensions
Serial No. 059 Calibration No. 06
Date: 2/20/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	907 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	506 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	524 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	500 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	362 mm	Yes
Top Rib Width From C/L	RW-1	165.1 - 180.3 mm	175 mm	Yes
Bottom Rib Width From C/L	RW-2	165.1 - 180.3 mm	176 mm	Yes
Difference Between Top & Bottom Rib Width from C/L		<= 2.5 mm	1.0 mm	Yes

Technician



Approved





Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 06 - 1

Test Date 02/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Peak Resultant Acceleration	120 - 150 g	142.7 g	Yes
Peak Longitudinal Acceleration	15 g Max	5.1 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Post Test

This dummy's head skin slipped half-way off during test and was reinstalled prior to calibration

Technician



Approved



03.02.2004 09:56:33 607

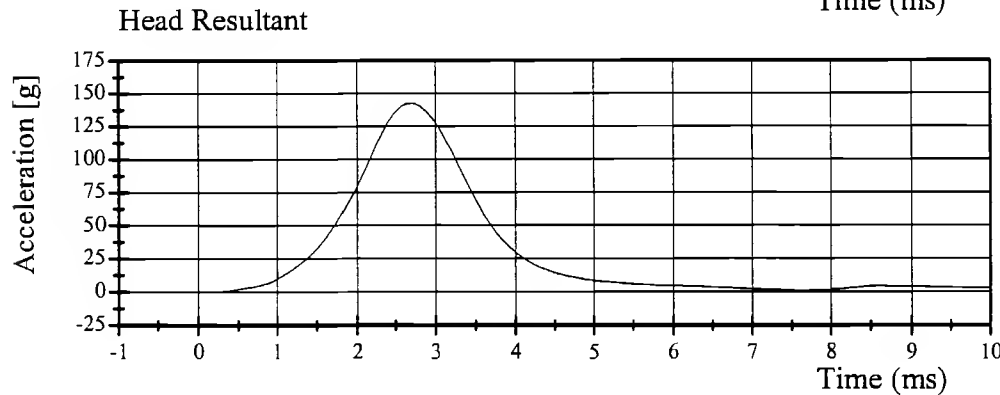
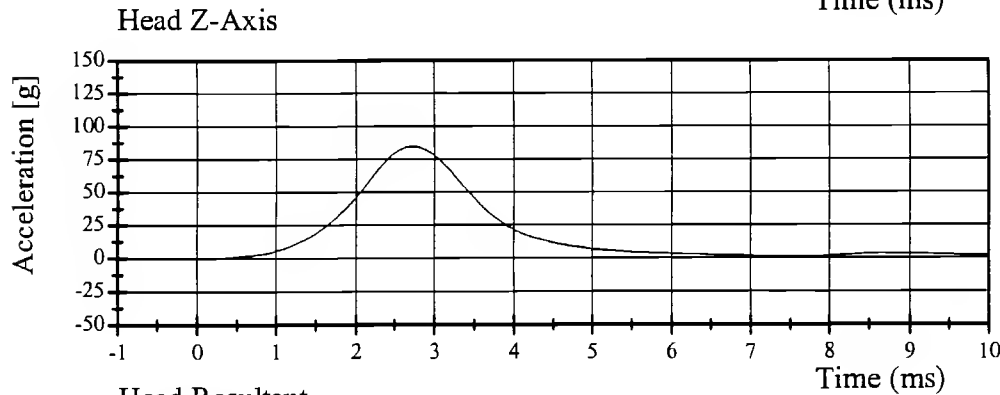
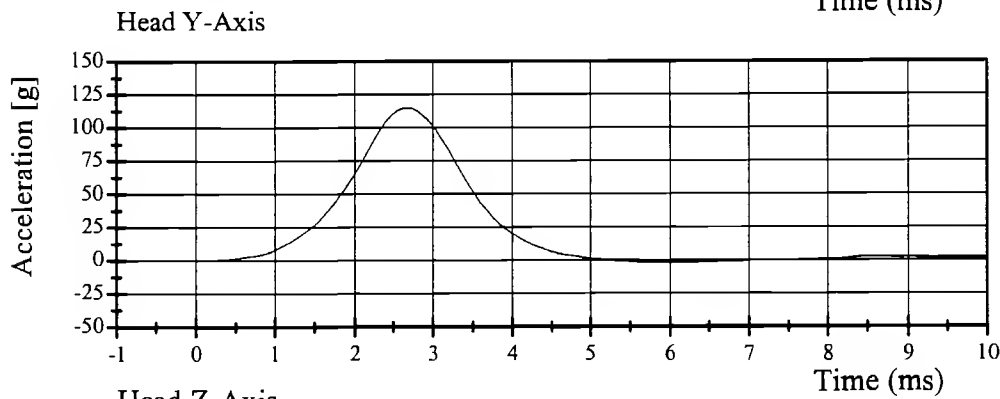
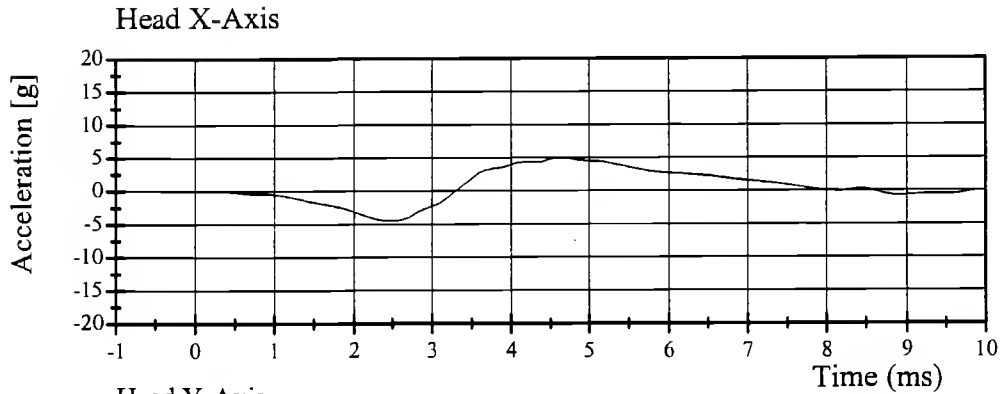


Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 06 - 1

Test Date 02/19/2004



03.02.2004 09:56:34 607



Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 06 - 2

Test Date 03/02/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Impact Velocity	6.89 - 7.13 m/s	6.97 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.47 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.81 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.66 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.11 - 7.22 m/s	Yes
Peak D Plane Rotation	66 - 82 °	72.4 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	61.0 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	83.3 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	59.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	8.8 ms	Yes

Comments:

Technician



Approved



03.02.2004 09:19:48 515



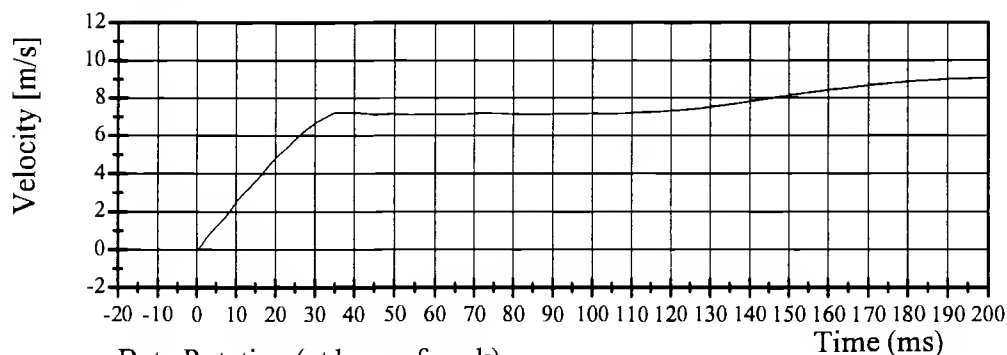
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 06 - 2

Test Date 03/02/2004

Integrated Pendulum Velocity

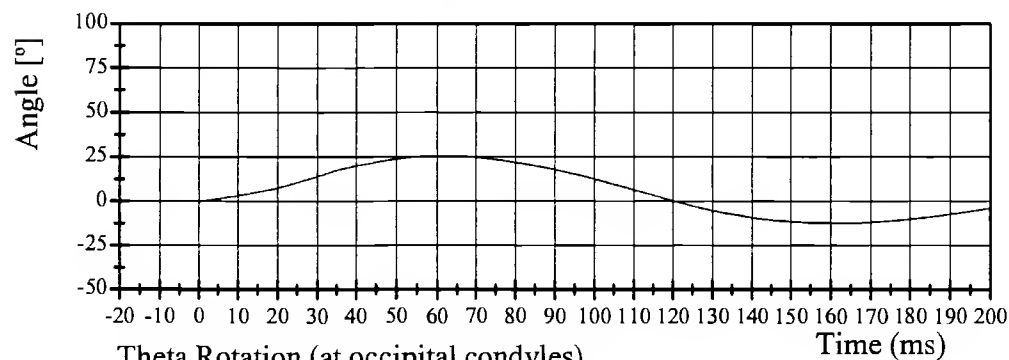


Filter Class: 180

Max: 9.3 m/s at 958.8 ms

Min: -0.0 m/s at -0.6 ms

Beta Rotation (at base of neck)

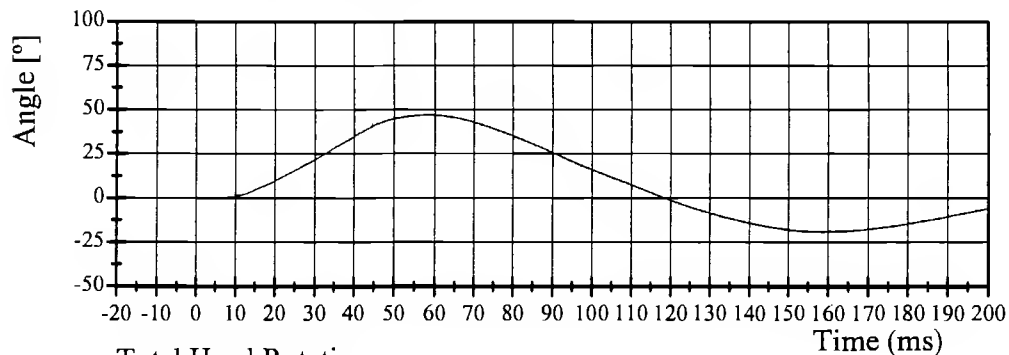


Filter Class: 60

Max: 25.4 ° at 61.8 ms

Min: -12.4 ° at 158.1 ms

Theta Rotation (at occipital condyles)

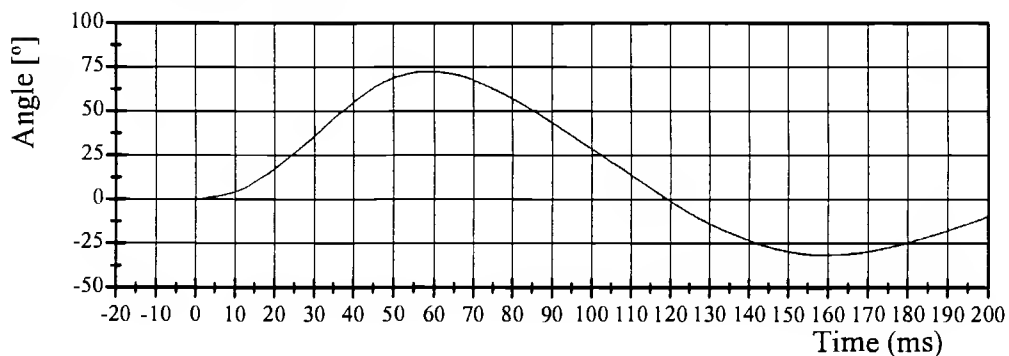


Filter Class: 60

Max: 47.1 ° at 57.8 ms

Min: -19.1 ° at 157.8 ms

Total Head Rotation



Filter Class: 60

Max: 72.4 ° at 58.3 ms

Min: -31.5 ° at 157.8 ms

03.02.2004 09:19:49 515



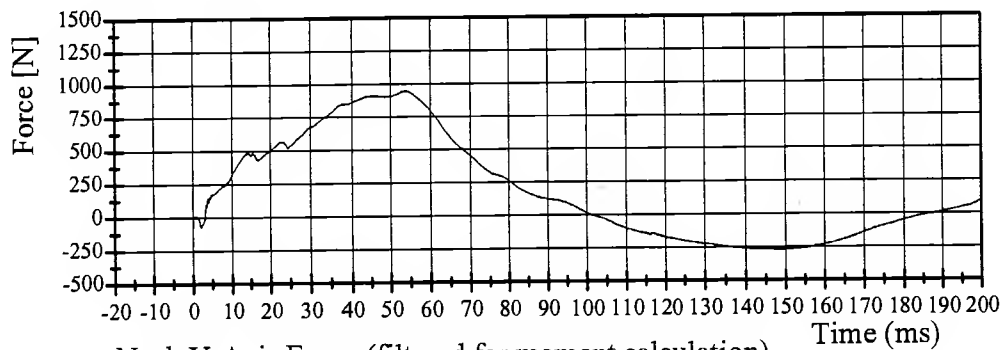
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 06 - 2

Test Date 03/02/2004

Neck Y-Axis Force

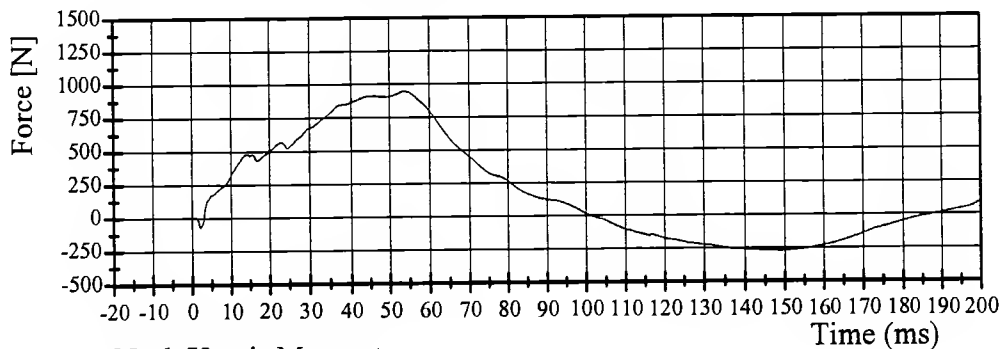


Filter Class: CFC 1000

Max: 947 N at 53.7 ms

Min: -272 N at 148.5 ms

Neck Y-Axis Force (filtered for moment calculation)

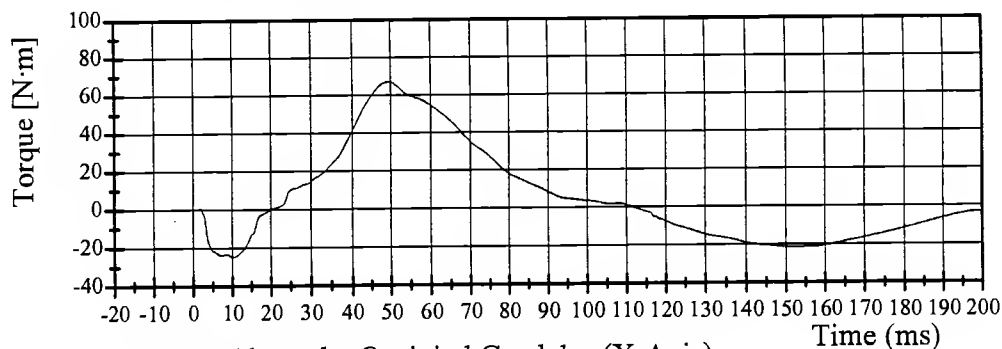


Filter Class: CFC 600

Max: 947 N·m at 53.7 ms

Min: -272 N·m at 148.6 ms

Neck X-axis Moment

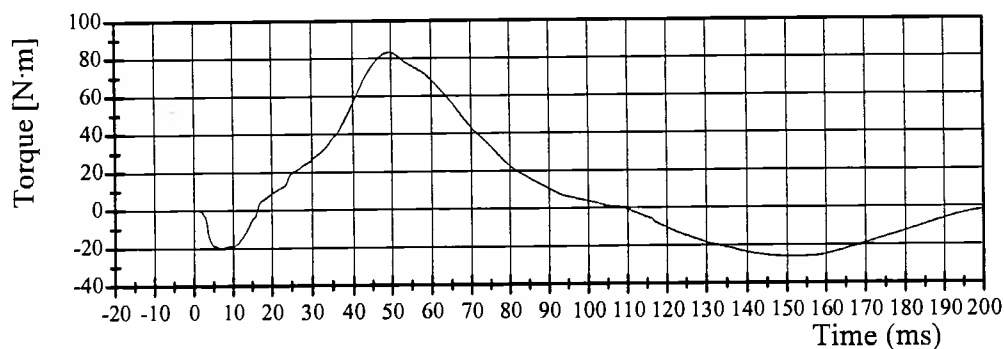


Filter Class: CFC 600

Max: 67.2 N·m at 49.5 ms

Min: -24.9 N·m at 10.3 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 83.3 ° at 49.5 ms

Min: -26.2 ° at 150.6 ms

03.02.2004 09:19:50 515



TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

20-FEB-04

TRC INC.

572F SN059 DAMPER TEST CAL06

TEST NUMBERS: DP05906A,DP05906B,DP05906C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.9 DEG. C
RELATIVE HUMIDITY		10 - 70 %	28.0 %
VELOCITY	FORCE	667 - 925 N	752 N
2.74 M/S	DISPLACEMENT	29.7 - 34.5 MM	30.0 MM
VELOCITY	FORCE	1733 - 2100 N	1685 N *
4.28 M/S	DISPLACEMENT	31.6 - 37.2 MM	34.7 MM
VELOCITY	FORCE	3703 - 4402 N	3986 N
6.07 M/S	DISPLACEMENT	33.3 - 39.5 MM	36.5 MM

DAMPER SETTING = 5.5

* TEST DOES NOT MEET SPECIFICATIONS

TECHNICIAN V. J. Watter

RUN NUMBER: 030204.1603;1

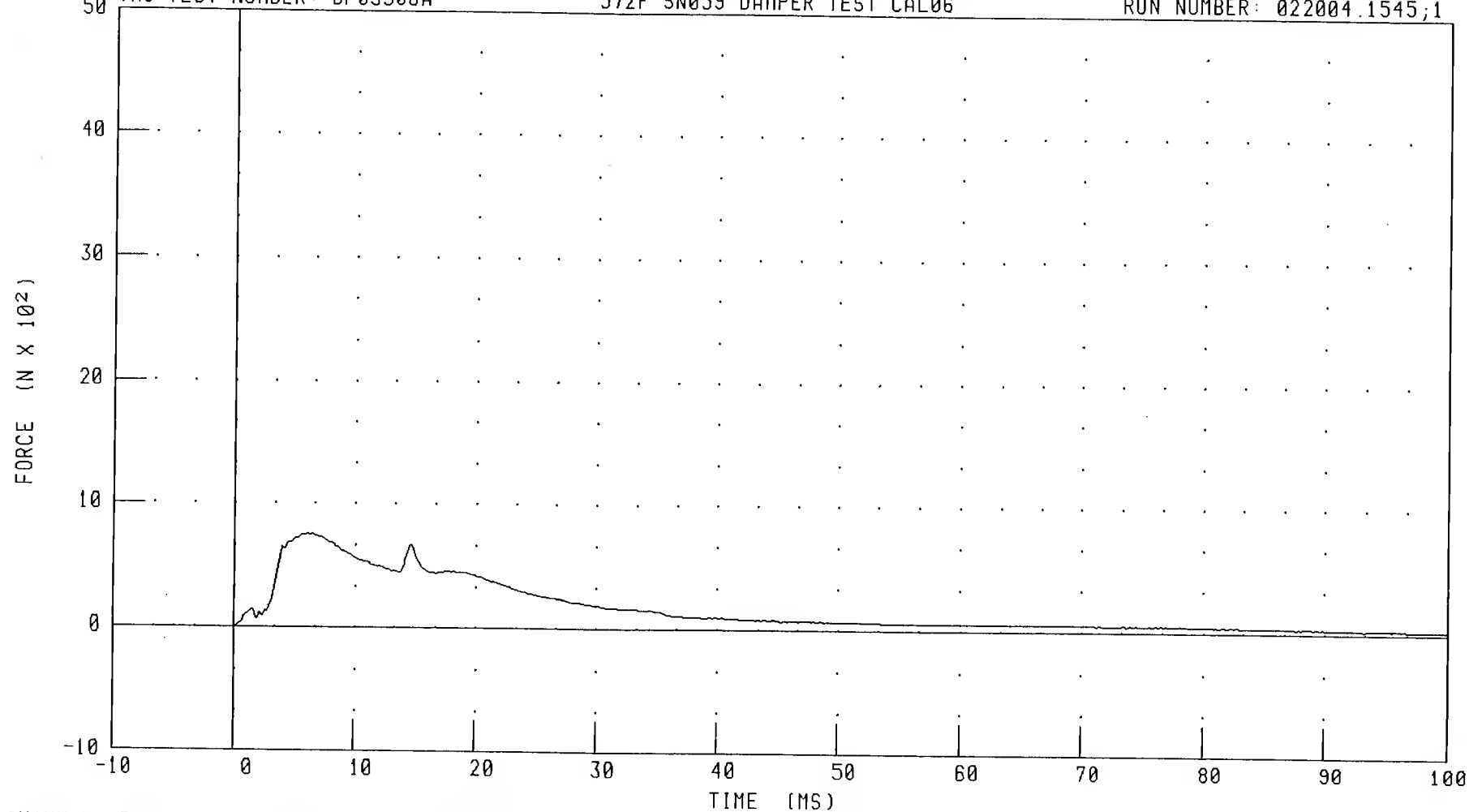
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05906A

572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1545;1



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 751.63 N @ 6.08 MS; -2.13 N @ -5.68 MS

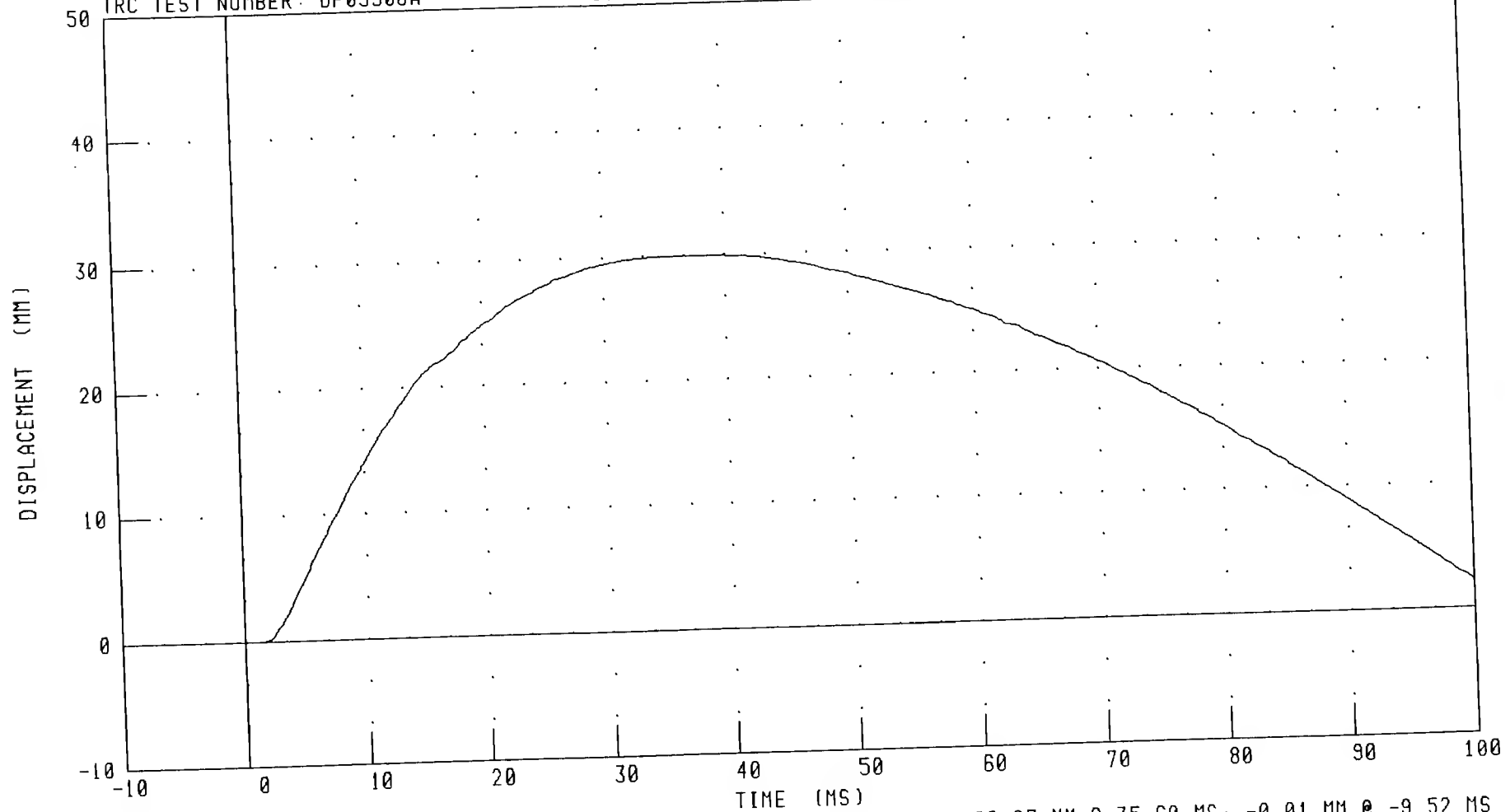
040218

PART 572-F S I D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT
572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1545;1

TRC TEST NUMBER: DP05906A



PEAK DATA: 29.97 MM @ 35.60 MS; -0.01 MM @ -9.52 MS

CHANNEL: CSTYD

FILTER: CH. CLASS 1000

C-52

040218

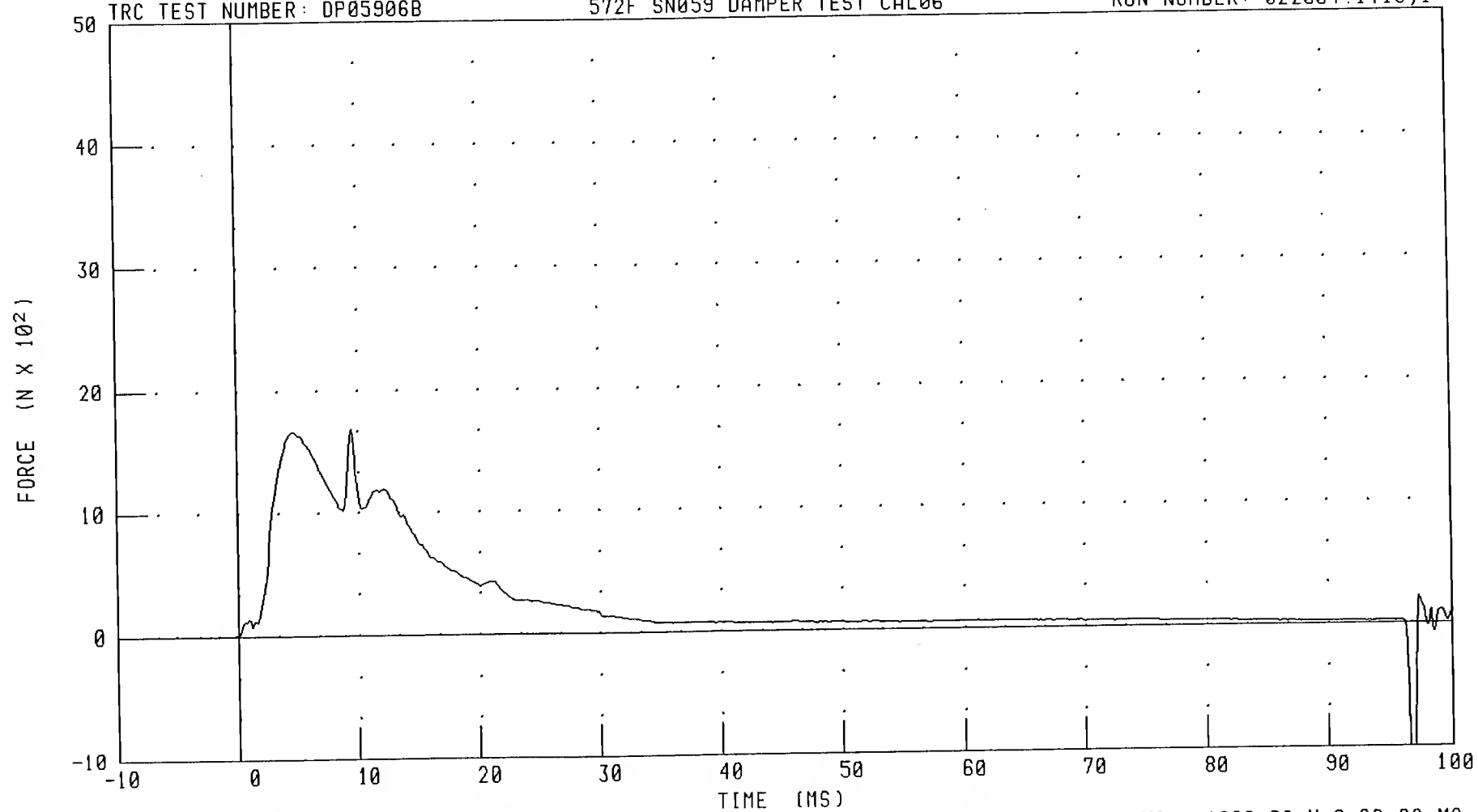
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05906B

572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1419;1



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

040218

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

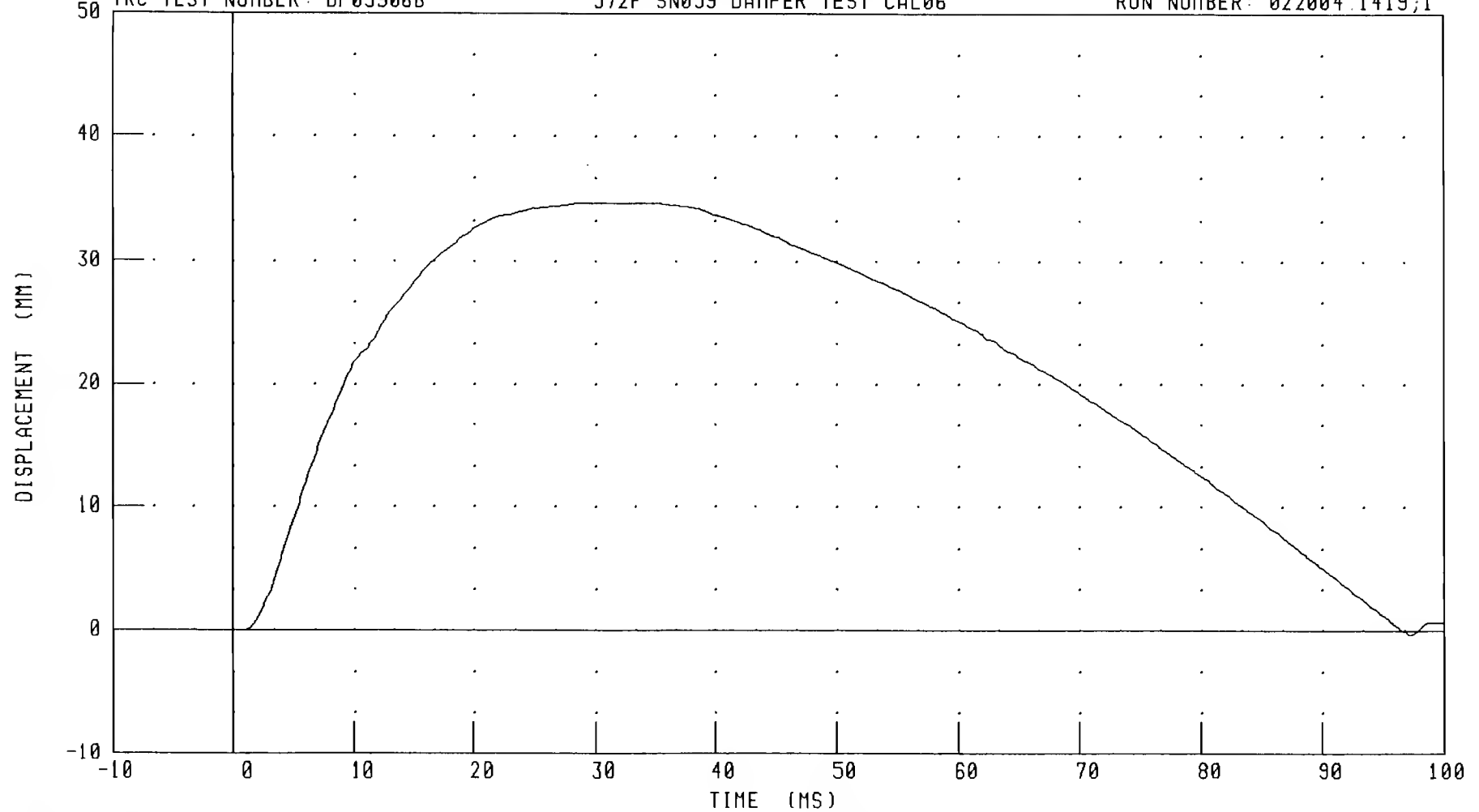
SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP05906B

572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1419;1

C-54



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 34.73 MM @ 30.24 MS; -0.38 MM @ 97.28 MS

040218

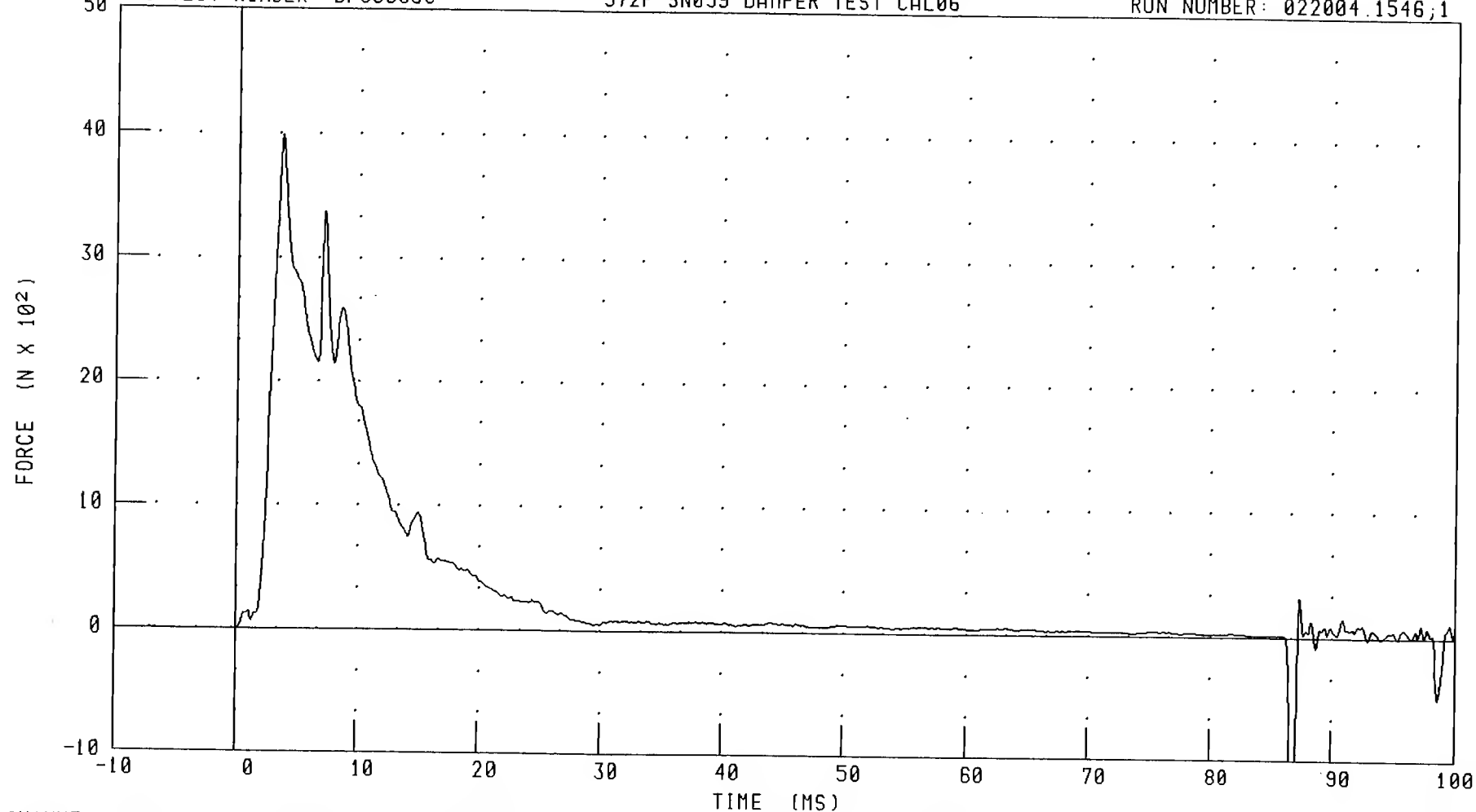
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05906C

572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1546;1



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 3986.15 N @ 3.60 MS; -1841.14 N @ 86.88 MS

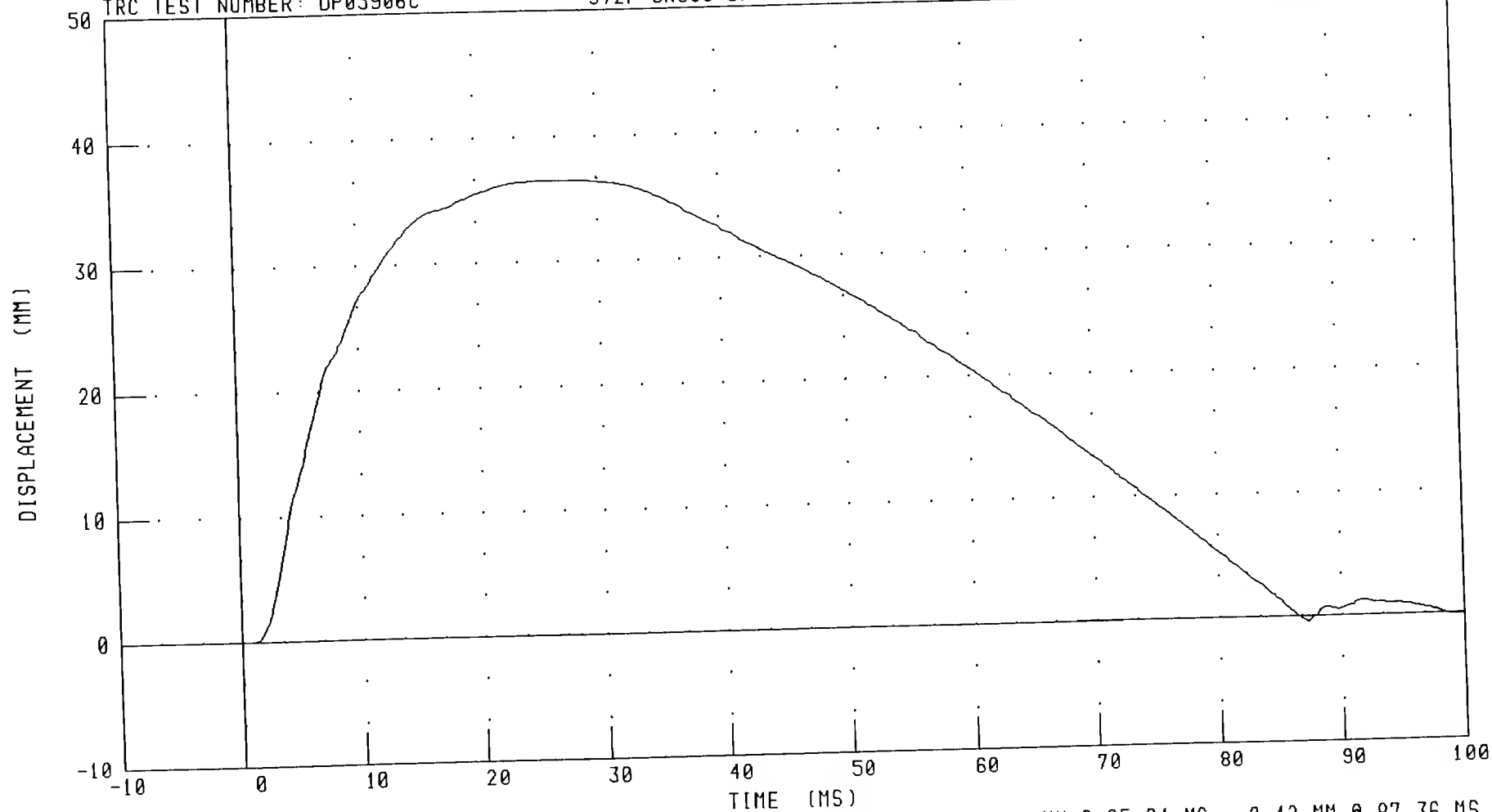
040218

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT
572F SN059 DAMPER TEST CAL06

RUN NUMBER: 022004.1546;1

TRC TEST NUMBER: DP05906C



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 36.45 MM @ 25.04 MS; -0.42 MM @ 87.36 MS

C-56

040218

Transportation Research Center Inc.

572B Abdomen Compression Test

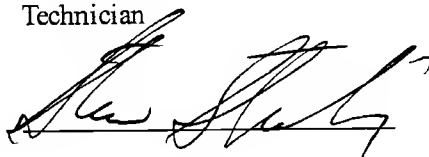
SID HIII Serial No. 059 Calibration No. 06 - 6

Test Date 02/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.7 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician



Approved



03.02.2004 15:38:24 1852

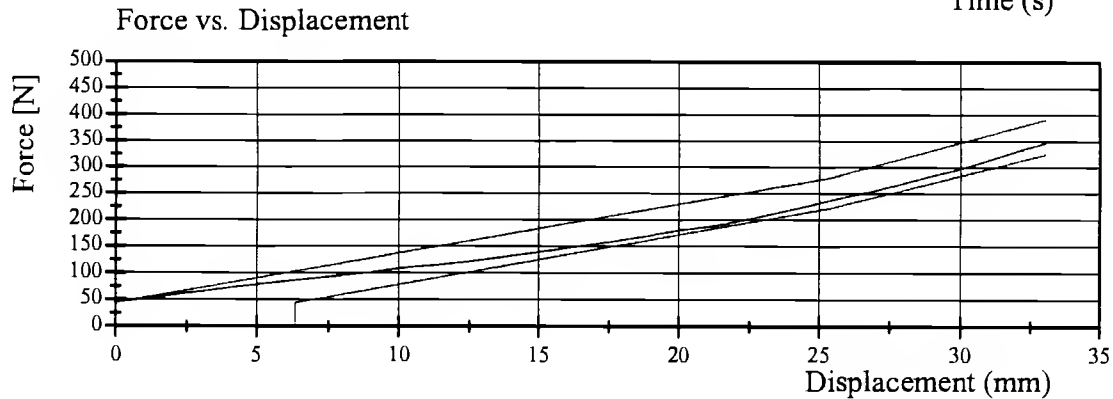
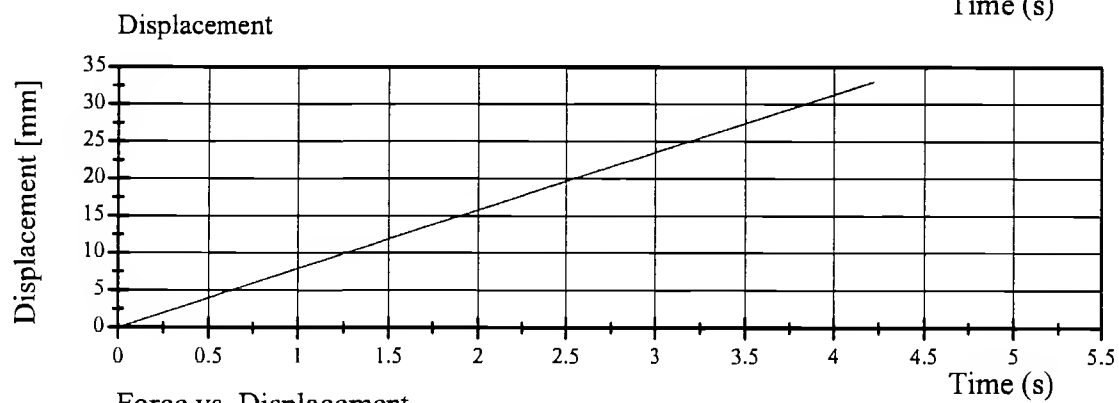
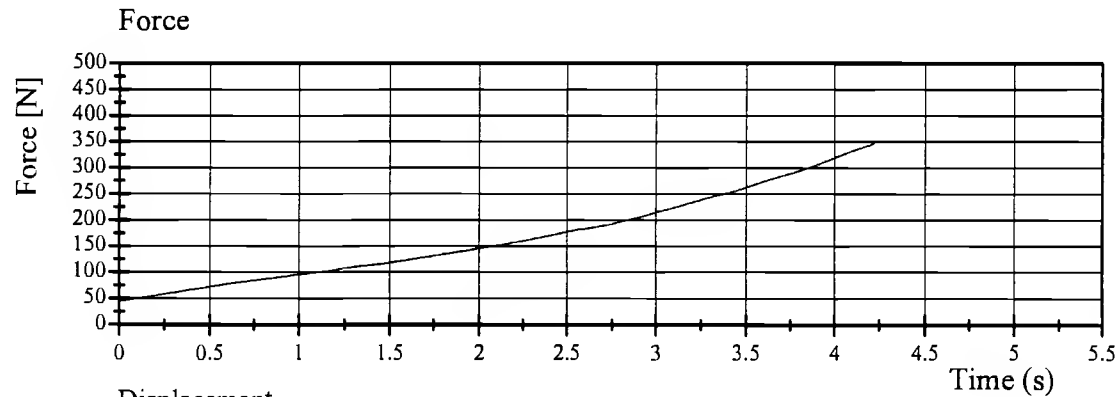


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 059 Calibration No. 06 - 6

Test Date 02/20/2004



03.02.2004 15:38:25 1852



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID HIII

CAL DATE: 23-Feb-04

TRC, INC. TEST NO: LF05906

572M SN 059 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	22.1 °C
RELATIVE HUMIDITY	10 – 70 %	31 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	133.4 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	186.8 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	209.1 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	3.0 °

TEST MEETS SPECIFICATIONS

TECHNICIAN

Paul K. Sturges

Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 06 - 1

Test Date 02/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.7 C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.32 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	39.2 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	38.0 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	20.1 g	Yes

Comments:

Technician



Approved



02.20.2004 07:51:05 1075

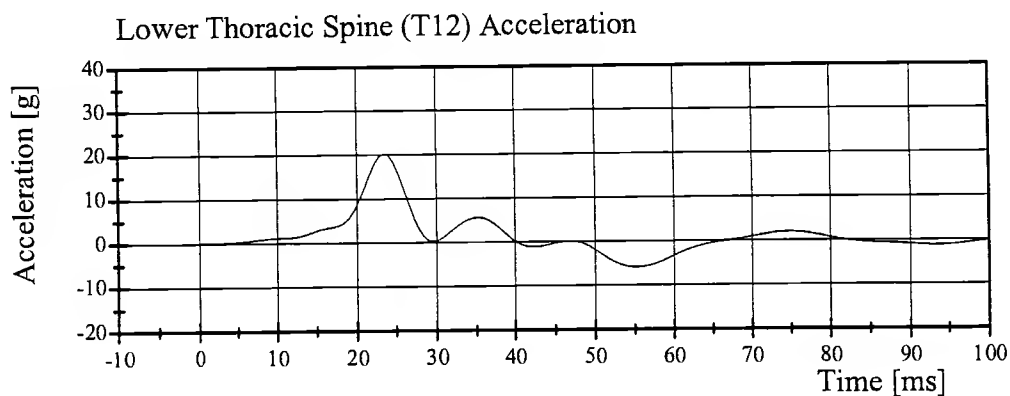
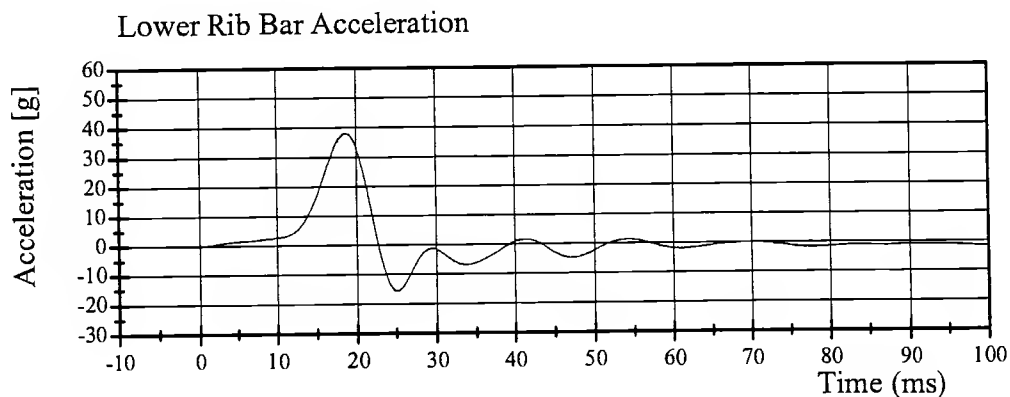
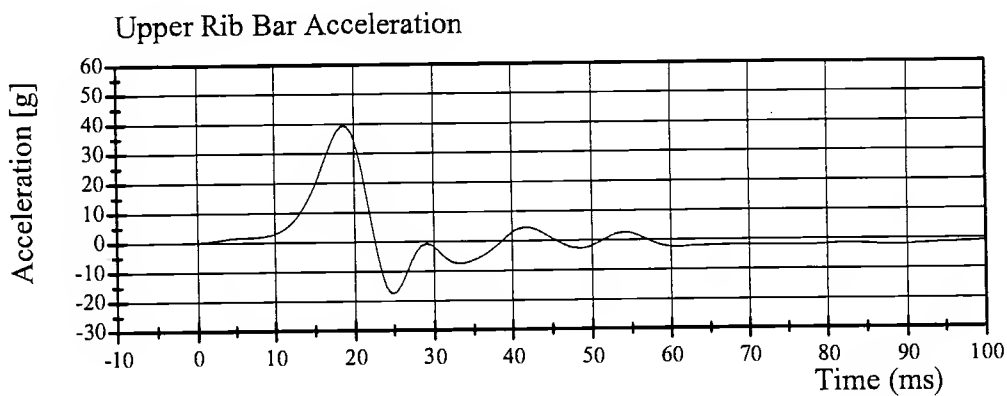


Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 06 - 1

Test Date 02/20/2004



02.20.2004 07:51:06 1075



Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 06 - 2

Test Date 02/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.4 C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.32 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	48.1 g	Yes
Time Above 20 g	3 - 7 ms	6.08 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.20.2004 07:41:17 1201

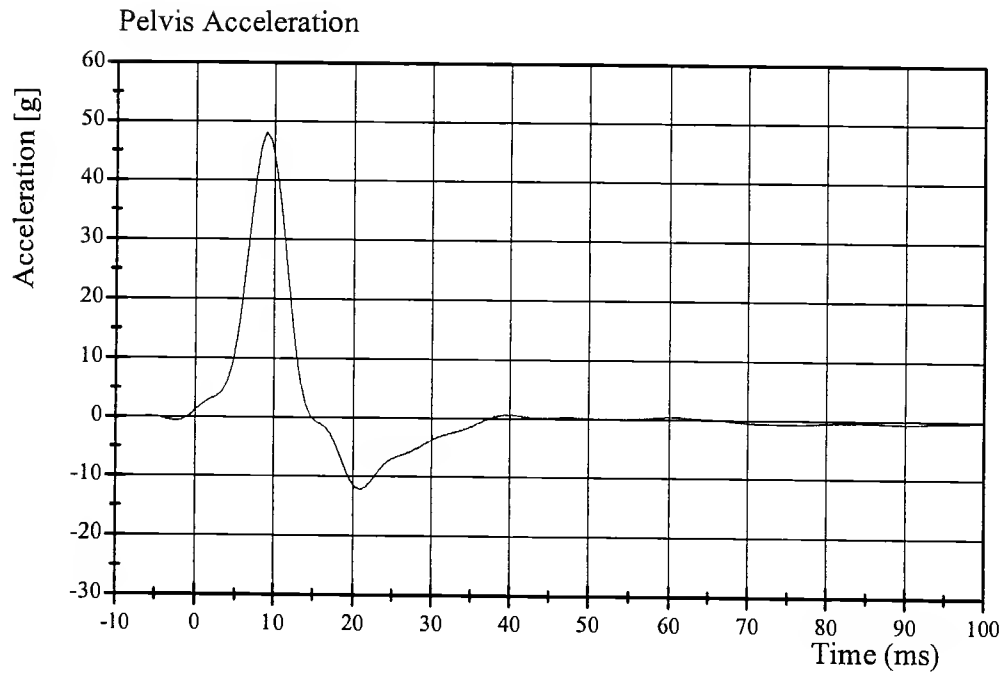


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 06 - 2

Test Date 02/20/2004



Filter Class: FIR 100

Max: 48.1 g at 9.0 ms

Min: -12.2 g at 20.9 ms

02.20.2004 07:41:17 1201



Calibration Test Results

Post-Test

SID HIII: 906

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber did not pass all test requirements.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.

SID/HIII Dummy

External Dimensions

Serial No. 906 Calibration No. 07

Date: 2/20/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	895 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	500 mm	No
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	525 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	495 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	375 mm	Yes
Top Rib Width From C/L	RW-1	165.1 - 180.3 mm	178 mm	Yes
Bottom Rib Width From C/L	RW-2	165.1 - 180.3 mm	178 mm	Yes
Difference Between Top & Bottom Rib Width from C/L		<= 2.5 mm	0.0 mm	Yes

Technician

John K. Clumidge

Approved

V.L. Walter



Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 07 - 1

Test Date 02/25/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Peak Resultant Acceleration	120 - 150 g	136.9 g	Yes
Peak Longitudinal Acceleration	15 g Max	6.1 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician



Approved



02.25.2004 11:32:44 611



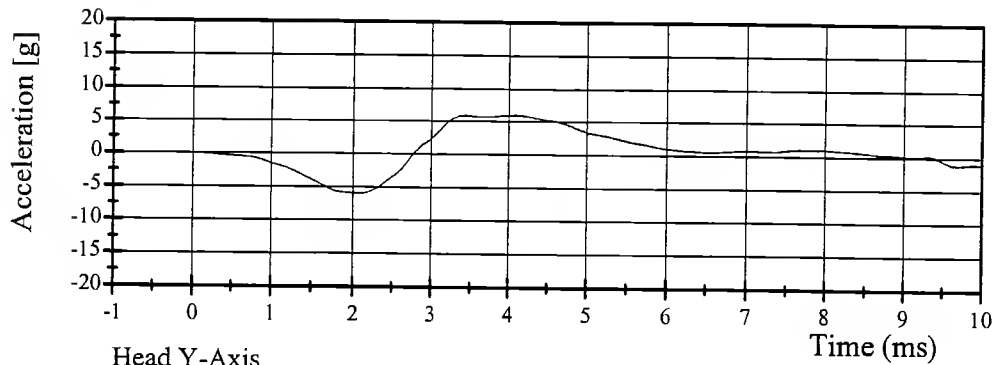
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 07 - 1

Test Date 02/25/2004

Head X-Axis

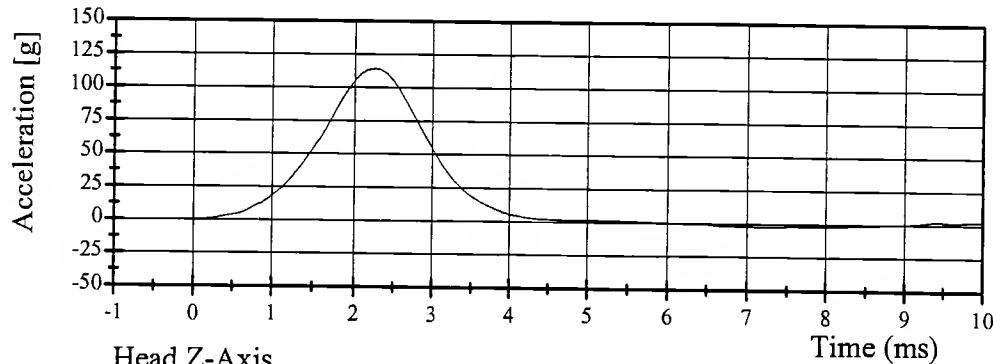


Filter Class: 1000

Max: 6.1 g at 4.1 ms

Min: -5.9 g at 2.1 ms

Head Y-Axis

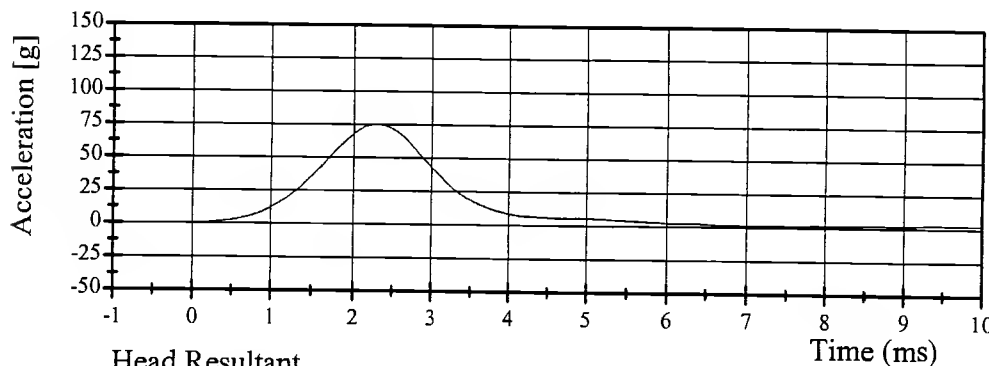


Filter Class: 1000

Max: 114.3 g at 2.2 ms

Min: -2.3 g at 7.3 ms

Head Z-Axis

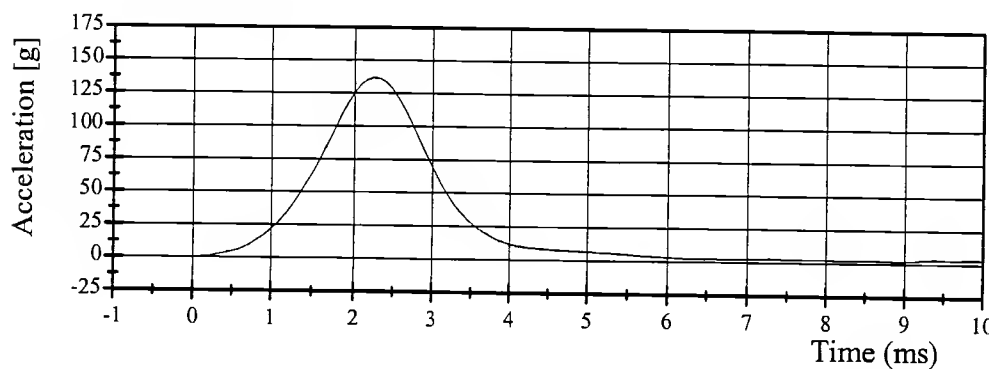


Filter Class: 1000

Max: 75.3 g at 2.3 ms

Min: 0.1 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 136.9 g at 2.2 ms

Min: 0.0 g at 3.0 ms

02.25.2004 11:32:45 611



Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/27/2004

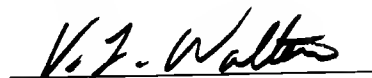
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.33 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.54 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.32 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.20 - 7.33 m/s	Yes
Peak D Plane Rotation	66 - 82 °	74.4 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	61.4 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	76.6 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	57.1 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	6.4 ms	Yes

Comments:

Technician



Approved



02.27.2004 13:57:58 512



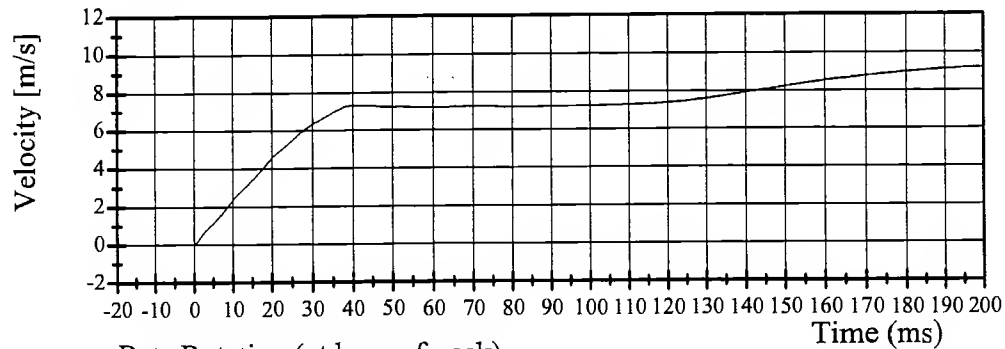
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/27/2004

Integrated Pendulum Velocity

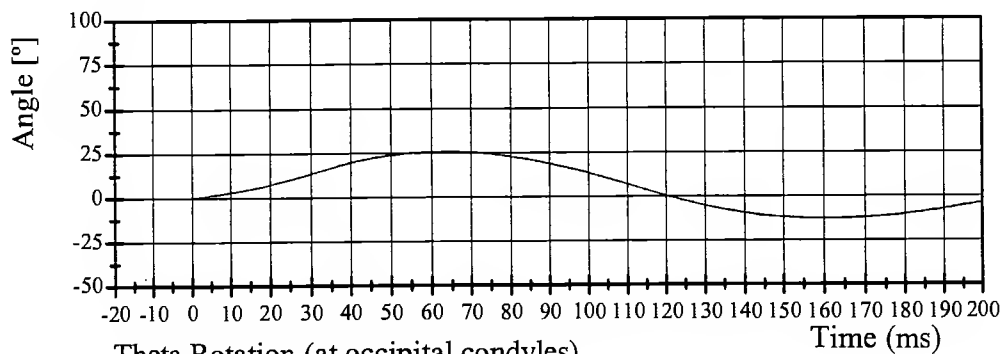


Filter Class: 180

Max: 9.6 m/s at 959.0 ms

Min: -0.0 m/s at -23.1 ms

Beta Rotation (at base of neck)

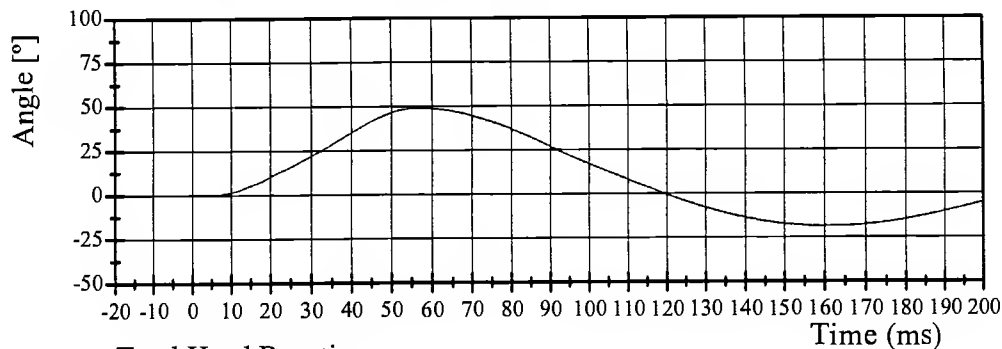


Filter Class: 60

Max: 25.8 ° at 64.5 ms

Min: -12.7 ° at 158.2 ms

Theta Rotation (at occipital condyles)

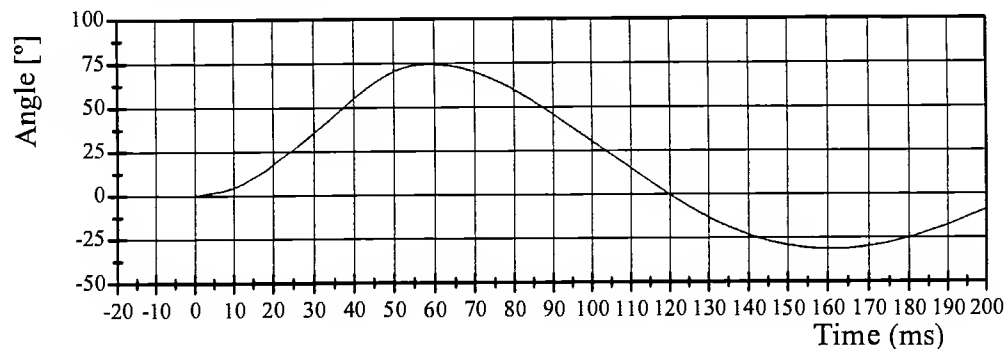


Filter Class: 60

Max: 49.0 ° at 56.6 ms

Min: -18.6 ° at 161.2 ms

Total Head Rotation



Filter Class: 60

Max: 74.4 ° at 58.6 ms

Min: -31.3 ° at 161.1 ms

02.27.2004 13:57:59 512



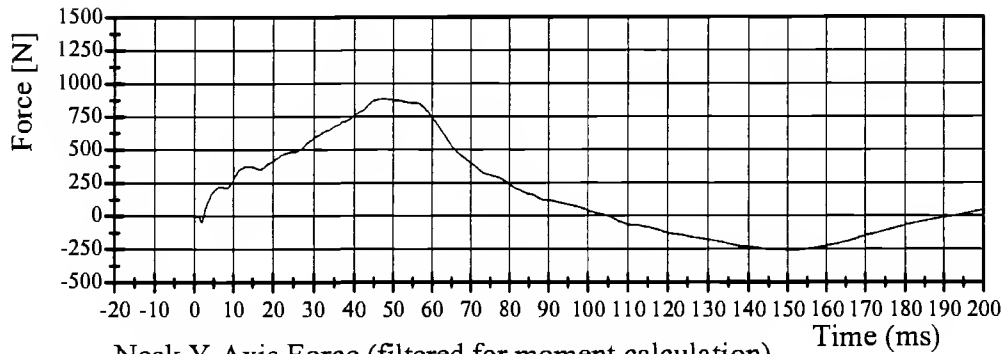
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/27/2004

Neck Y-Axis Force

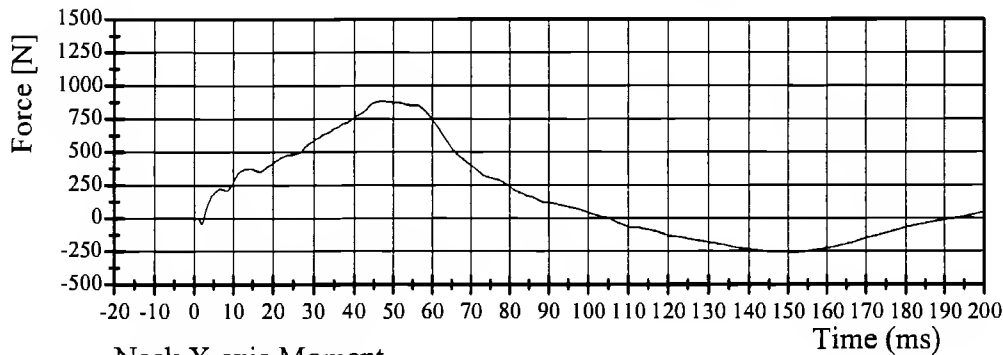


Filter Class: CFC 1000

Max: 886 N at 46.7 ms

Min: -260 N at 151.1 ms

Neck Y-Axis Force (filtered for moment calculation)

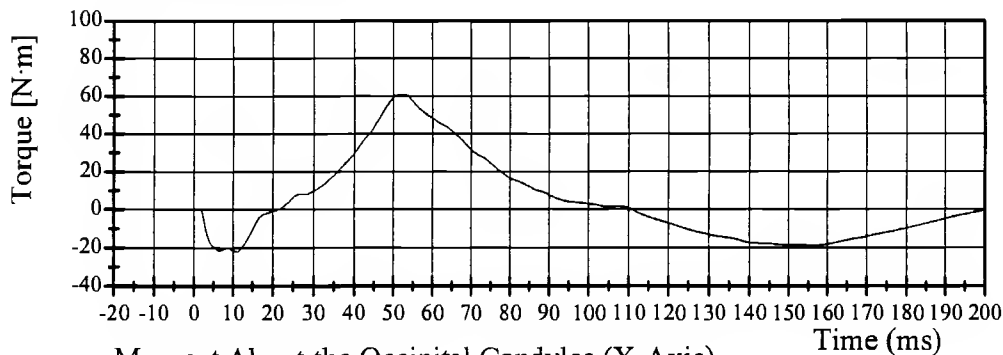


Filter Class: CFC 600

Max: 886 N·m at 46.9 ms

Min: -260 N·m at 151.2 ms

Neck X-axis Moment

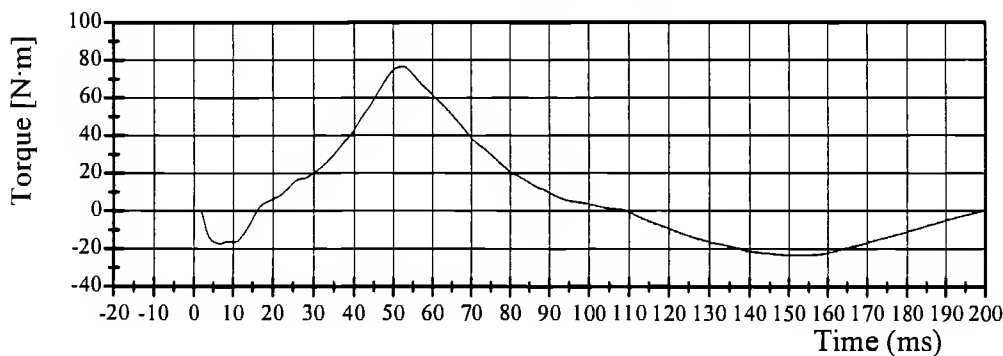


Filter Class: CFC 600

Max: 61.2 N·m at 52.3 ms

Min: -22.0 N·m at 11.1 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 76.6 ° at 52.2 ms

Min: -23.2 ° at 151.1 ms

02.27.2004 13:58:00 512



Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/23/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.7 - 7.9 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

John K. Clumidge

Approved

V. J. Walter

02.23.2004 16:14:03 2328

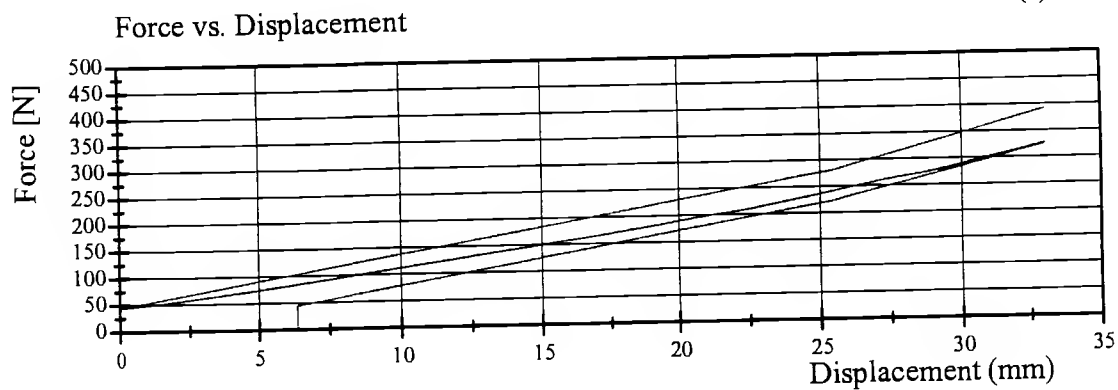
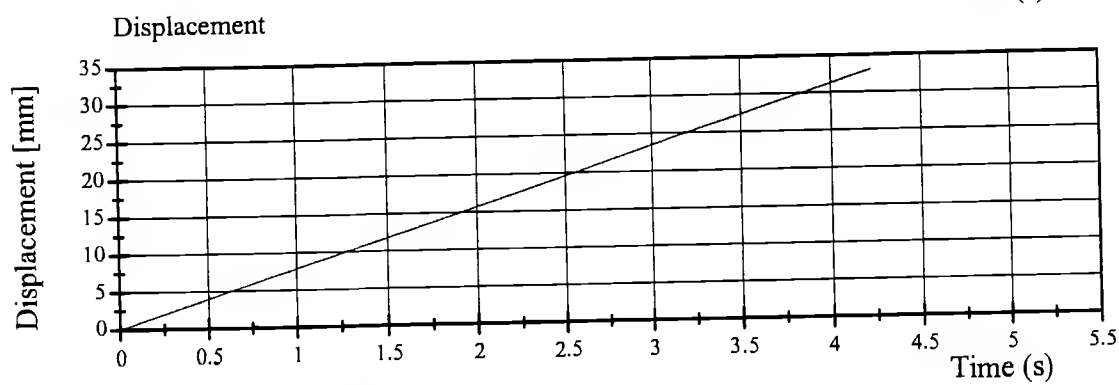
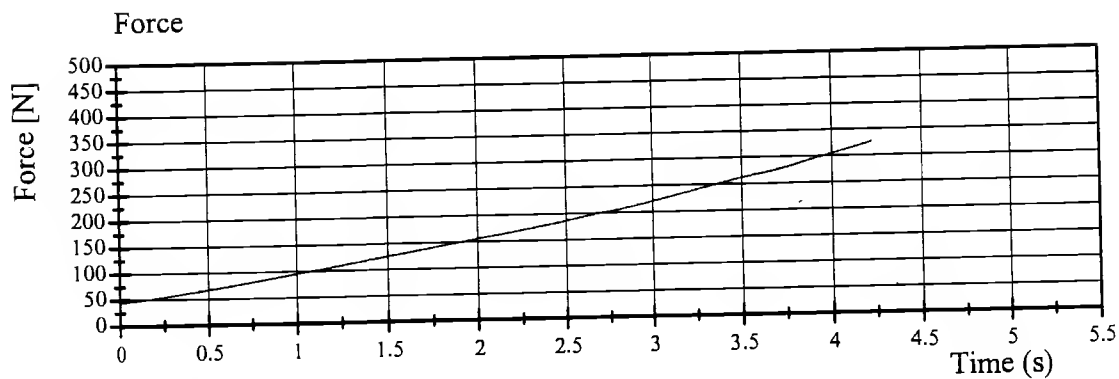


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/23/2004



02.23.2004 16:14:04 2328



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID/HIII

CAL DATE: 25-Feb-04

TRC, INC.

TEST NO: LF90607

572M SN 906 TORSO FLEX CAL 07

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.5 °C
RELATIVE HUMIDITY	10 – 70 %	29 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	137.9 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	195.7 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	258.0 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	7 °

TEST MEETS SPECIFICATIONS

TECHNICIAN

David K. [Signature]

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

23-FEB-04

TRC INC.

572F SN906 DAMPER TEST CAL07

TEST NUMBERS: DP90607A1,DP90607B,DP90607C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	22.2 DEG. C
RELATIVE HUMIDITY		10 - 70 %	27.0 %
VELOCITY	FORCE	667 - 925 N	798 N
2.72 M/S	DISPLACEMENT	29.7 - 34.5 MM	29.0 MM *
VELOCITY	FORCE	1733 - 2100 N	1967 N
4.28 M/S	DISPLACEMENT	31.6 - 37.2 MM	33.9 MM
VELOCITY	FORCE	3663 - 4355 N	4118 N
6.02 M/S	DISPLACEMENT	33.2 - 39.5 MM	35.9 MM

DAMPER SETTING = 6.0

* TEST DOES NOT MEET SPECIFICATIONS

TECHNICIAN

V. J. Watts

RUN NUMBER: 030204.1643;1

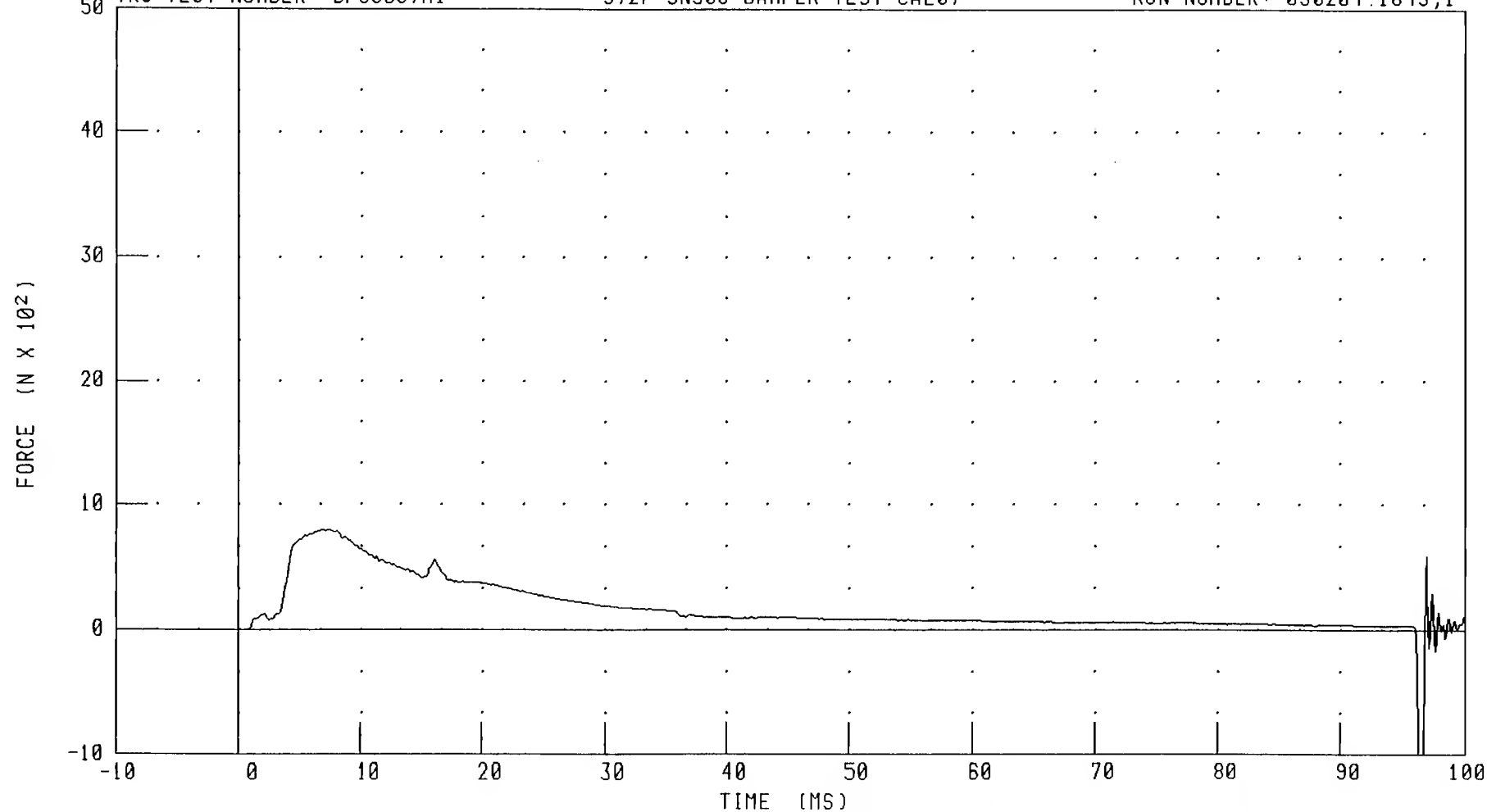
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP90607A1

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1643;1



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 798.23 N @ 7.36 MS; -2672.49 N @ 96.48 MS

C-75

040218

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

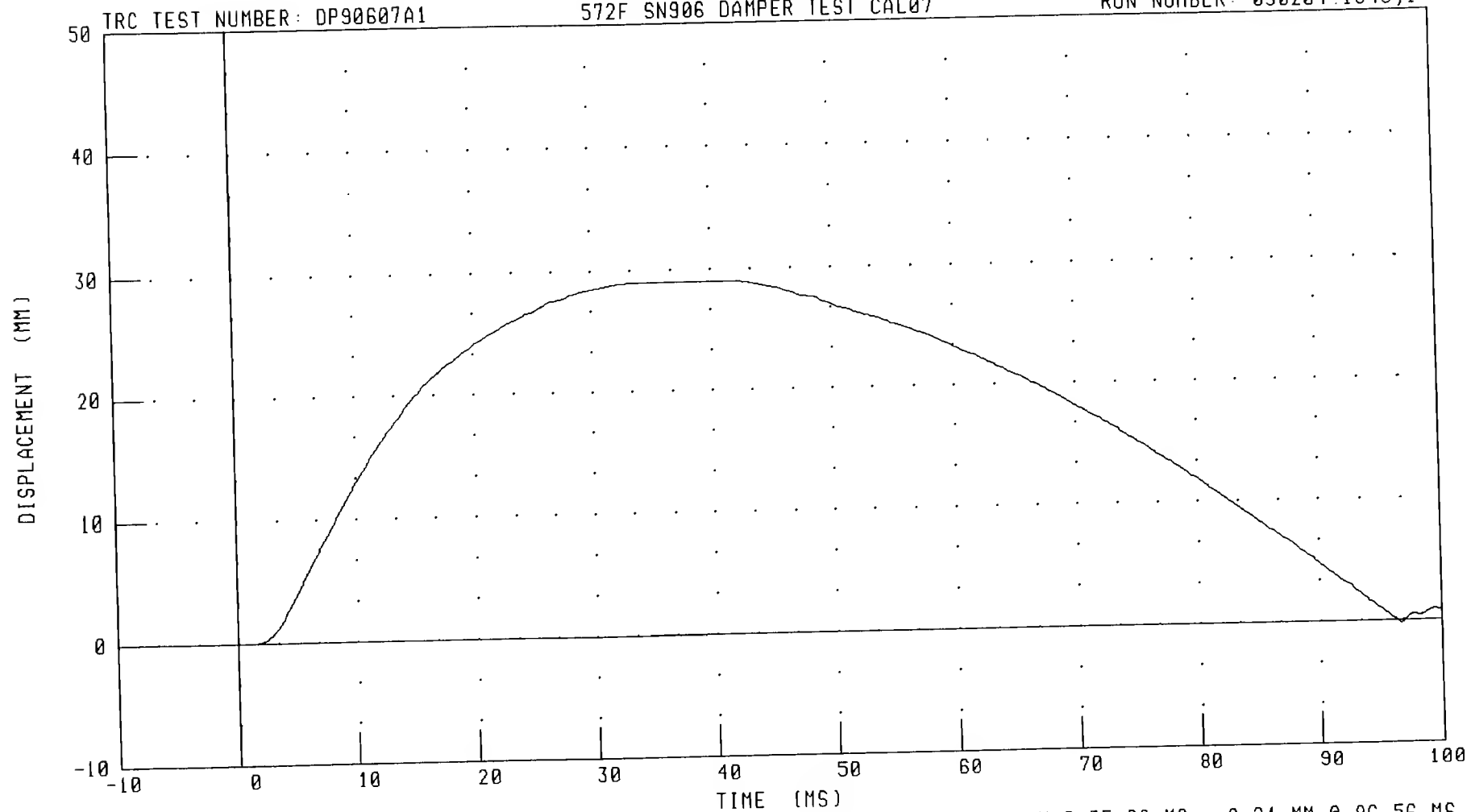
SHOCK ABSORBER DISPLACEMENT

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1643;1

TRC TEST NUMBER: DP90607A1

C-76



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 29.05 MM @ 35.92 MS; -0.24 MM @ 96.56 MS

040218

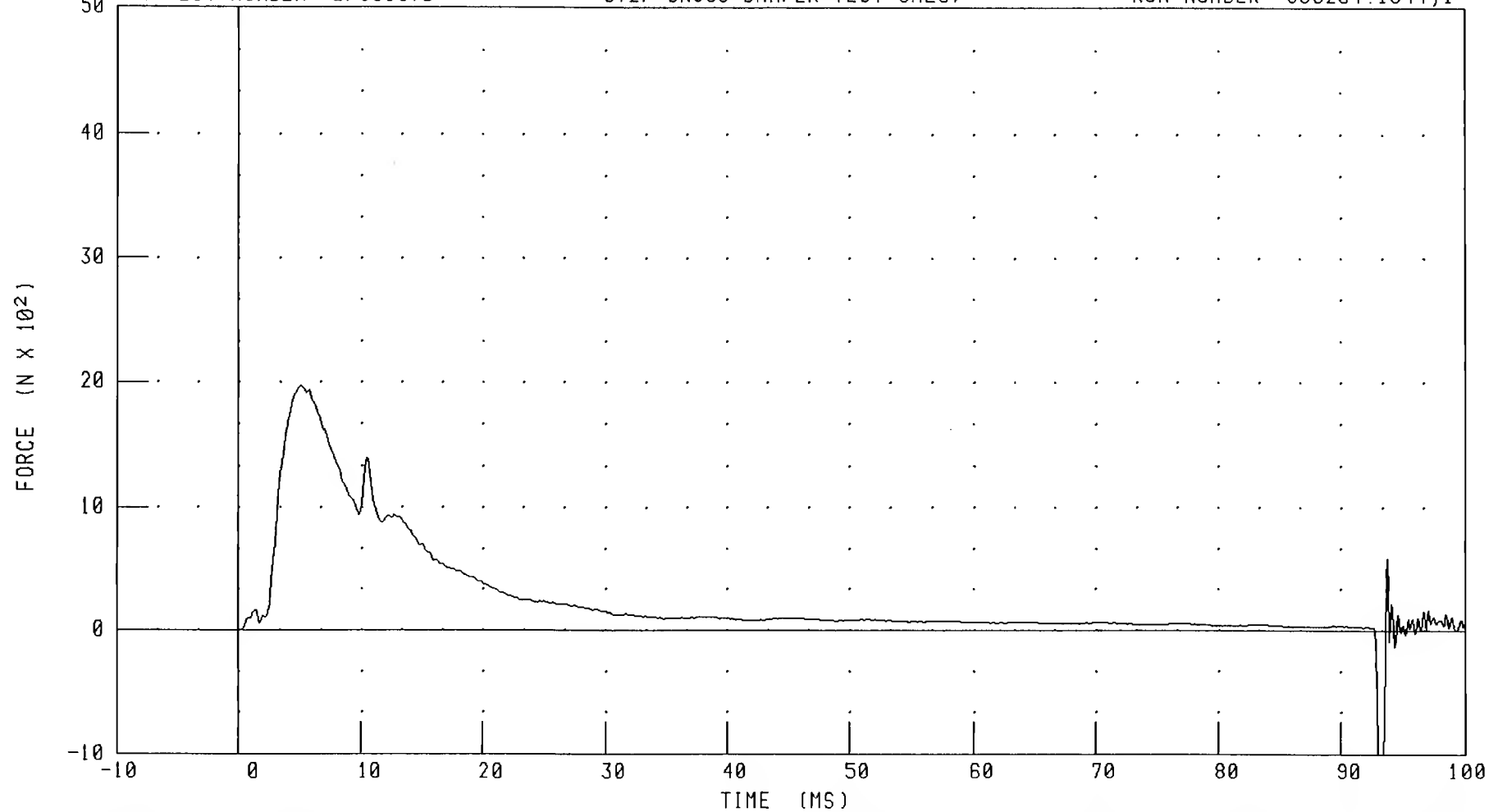
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP90607B

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1644;1



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 1967.43 N @ 5.04 MS; -2303.07 N @ 93.20 MS

040218

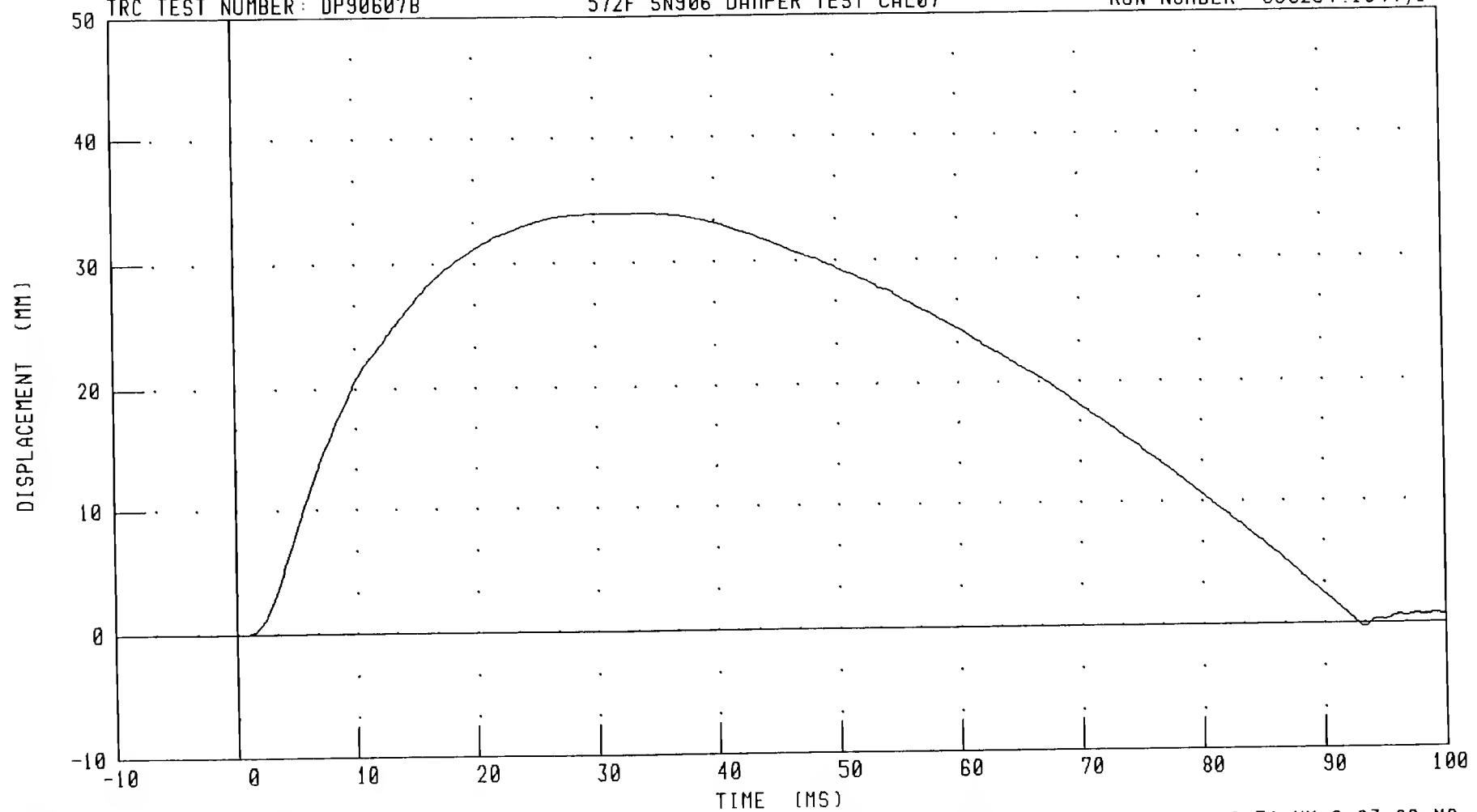
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1644;1

TRC TEST NUMBER: DP90607B



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 33.93 MM @ 31.76 MS; -0.31 MM @ 93.28 MS

040218

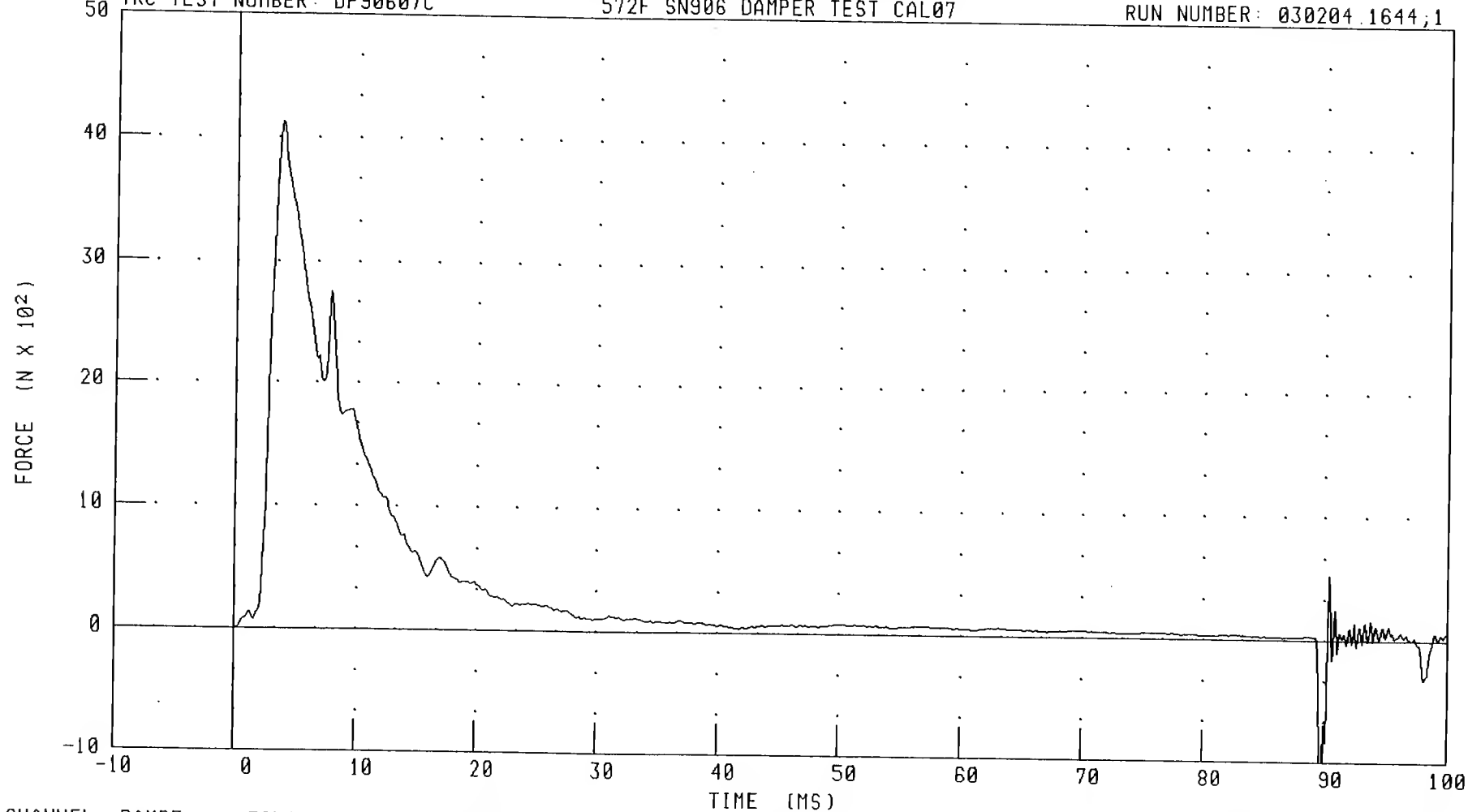
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1644;1

TRC TEST NUMBER: DP90607C



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 4117.98 N @ 3.68 MS; -1996.39 N @ 89.76 MS

040218

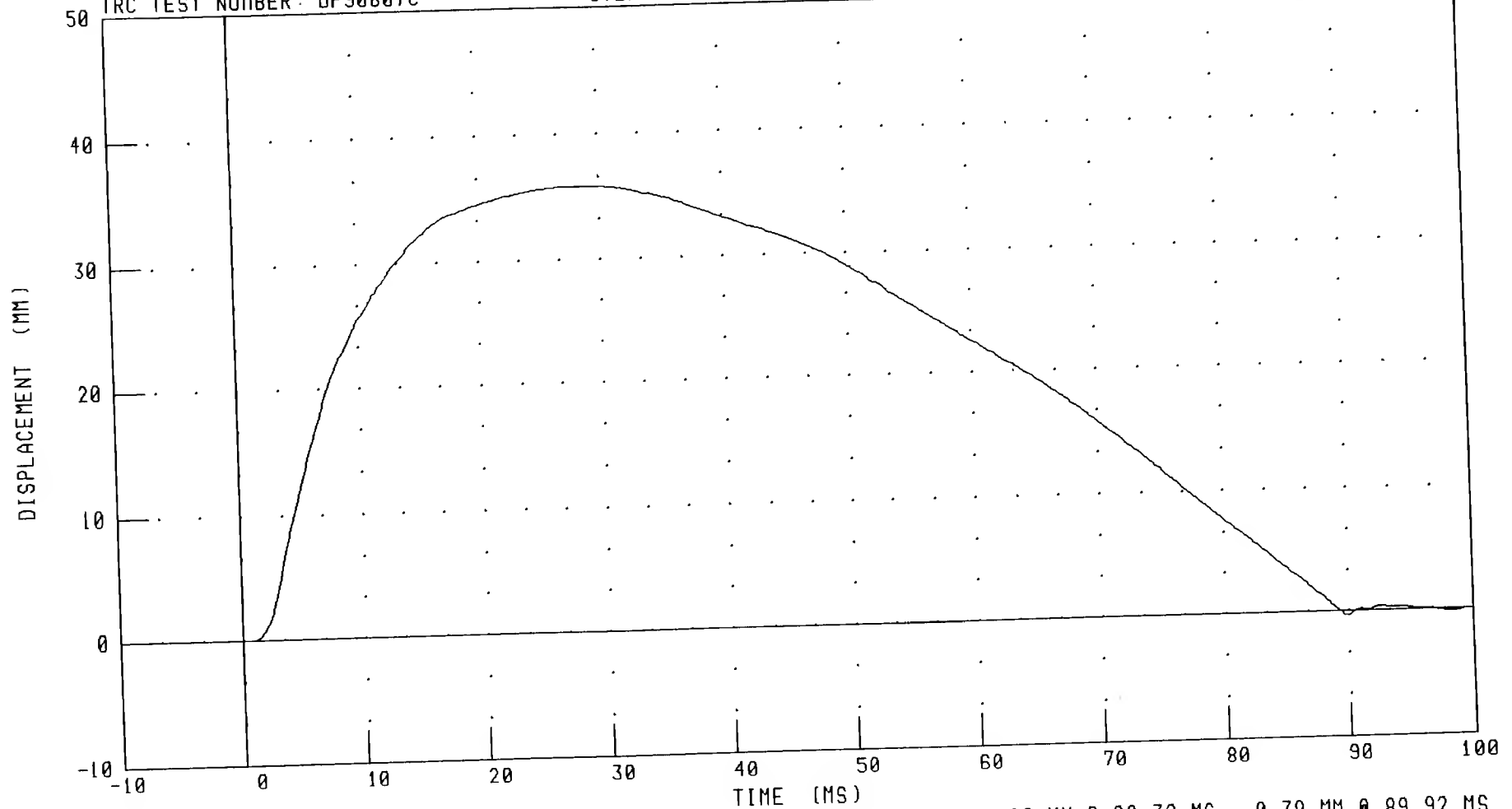
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN906 DAMPER TEST CAL07

RUN NUMBER: 030204.1644;1

TRC TEST NUMBER: DP90607C



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 35.89 MM @ 28.32 MS; -0.39 MM @ 89.92 MS

040218

Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 07 - 1

Test Date 02/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.4 C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.31 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	41.8 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	42.9 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	18.6 g	Yes

Comments:

Technician

John K. Clavidge

Approved

V. F. Walters

02.20.2004 08:56:55 1053



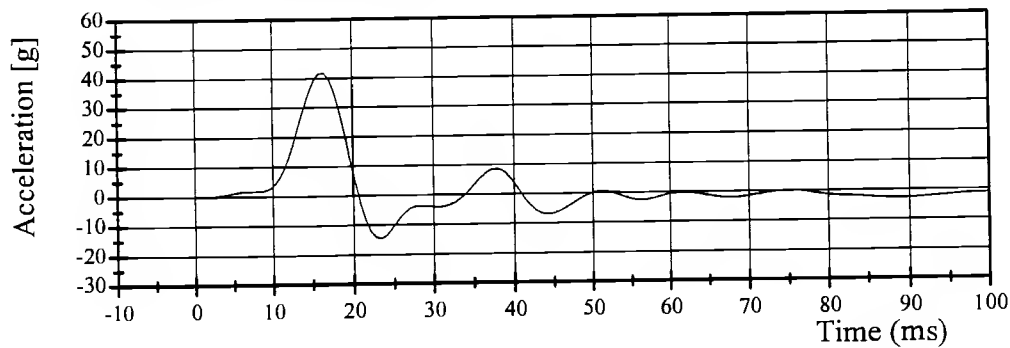
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 07 - 1

Test Date 02/20/2004

Upper Rib Bar Acceleration

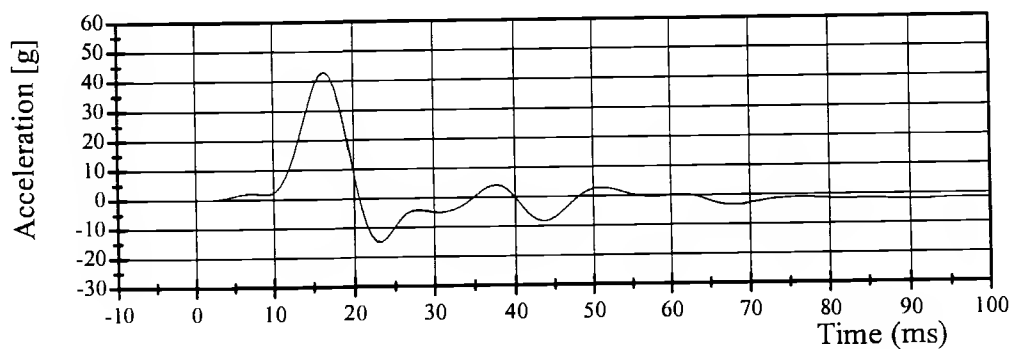


Filter Class: FIR 100

Max: 41.8 g at 16.4 ms

Min: -14.7 g at 23.4 ms

Lower Rib Bar Acceleration

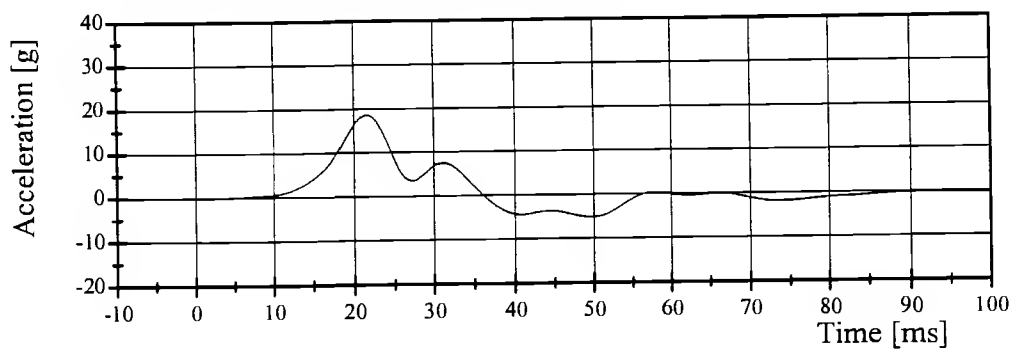


Filter Class: FIR 100

Max: 42.9 g at 16.5 ms

Min: -14.9 g at 23.3 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 18.6 g at 21.4 ms

Min: -5.2 g at 49.6 ms

02.20.2004 08:56:56 1053



Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/20/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.1 C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.29 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	52.6 g	Yes
Time Above 20 g	3 - 7 ms	5.76 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician

John K. Churchill

Approved

V. J. Walter

02.20.2004 11:04:00 1186

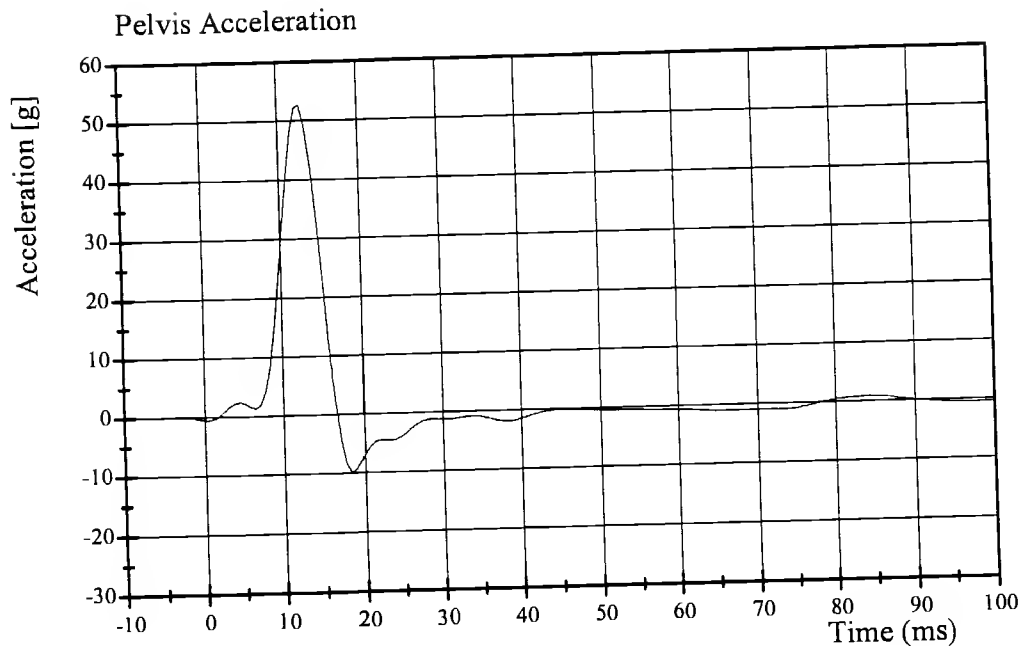


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 906 Calibration No. 07 - 2

Test Date 02/20/2004



Filter Class: FIR 100

Max: 52.6 g at 12.6 ms

Min: -9.8 g at 18.3 ms

02.20.2004 11:04:01 1186



Transportation Research Center Inc.

SID HIII Pre-Use Inspection

Type: SID HIII S/N: 059 Mfr: ASTC Test Date: 02/18/04Proj./Seg. No.: 20020455-2050 Test Eng.: Walter D. Dudek

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition		
Accel. Mount Bolts and Cables		
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right) N/A
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left side configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (40 ft/lbs)	X	
Breakaway Femur Bolts (5-6 ft/lbs)	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge Date: 02/17/04

Transportation Research Center Inc.

SID HIII Pre-Use Inspection

Type: SID HIII S/N: 906 Mfr: UNK Test Date: 02/18/04

Proj./Seg. No.: 20020455-2050 Test Eng.: Walter D. Dudek

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition		
Accel. Mount Bolts and Cables		
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right) N/A
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left side configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (40 ft/lbs)	X	
Breakaway Femur Bolts (5-6 ft/lbs)	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge

Date: 02/17/04

Transportation Research Center Inc.

SID HIII Post-Use Inspection

Type: SID HIII S/N: 059 Mfr: ASTC Test Date: 02/18/04
Proj./Seg. No.: 20020455-2050 Test Eng.: Walter D. Dudek

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left side configuration	
Jacket Condition	X
Arm Foam Condition	X
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Iliac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: Left arm foam - shallow cut on bottom. Head skin slipped down on skull during
test. I repositioned it and we will monitor this situation. No other damage.

Inspection Completed By: J. Clarridge

Date: 02/19/04

Transportation Research Center Inc.

SID HIII Post-Use Inspection

Type: SID HIII S/N: 906 Mfr: UNK Test Date: 02/18/04
 Proj./Seg. No.: 20020455-2050 Test Eng.: Walter D. Dudek

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left side configuration	
Jacket Condition	X
Arm Foam Condition	X
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Iliac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: Left arm foam - moderate cut on bottom - we will monitor. No other damage
found.

Inspection Completed By: J. Clarridge

Date: 02/19/04

Appendix D

Test Equipment List and Calibration Information

Sign Convention
SAE J211 MAR95

Accelerometers:

+X: Forward
+Y: Rightward
+Z: Downward

Potentiometers:

+Chest longitudinal deflection: Outward
+Chest lateral deflection: Rightward
+Seat belt displacement: Outward
+Seat belt extension: Elongation
+Knee slider displacement: Distance between femur and tibia
increased (in relation to a seated
dummy)

Rotation potentiometers:

+About the X-axis: Left foot-eversion
Right foot-inversion
+About the Y-axis: Left/right foot-dorsiflexion
+About the Z-axis: Left foot-internal
Right foot-external

Load cells:

+Femur force: Tension
+Seat belt force: Tension
+Barrier force: Tension

Neck load cells:

+X force: Head pushed rearward
+Y force: Head pushed leftward
+Z force: Head pulled upward (tension on neck)
+X moment: Left ear rotating toward left shoulder
+Y moment: Chin rotating toward chest
+Z moment: Chin rotating toward left shoulder

Tibia load cells:

+X force: Ankle forward, knee rearward
+Y force: Ankle rightward, knee leftward
+Z force: Tension
+X moment: Bottom of tibia moving leftward
+Y moment: Bottom of tibia moving rearward

Sign Convention, Cont'd.
SAE J211 MAR95

Lumbar load cells:

+X force:	Chest rearward, pelvis forward
+Y force:	Chest leftward, pelvis rightward
+Z force:	Chest upward, pelvis downward
+X moment:	Left shoulder toward left hip
+Y moment:	Sternum toward front of legs
+Z moment:	Right shoulder forward, left shoulder rearward

Frequency Response Classes
SAE J211 MAR95

Typical Test Measurements

Channel Class

Vehicle Structural Accelerations for use in:

Total vehicle comparison	60
Collision simulation input	60
Component analysis	600
Integration for velocity or displacement	180

Barrier Face Forces

60

Belt Restraint System Loads

60

Anthropomorphic Test Device

Head accelerations (linear and angular)	1000
---	------

Neck

Forces	1000
--------	------

Moments	600
---------	-----

Thorax

Spine accelerations	180
---------------------	-----

Rib accelerations	1000
-------------------	------

Sternum accelerations	1000
-----------------------	------

Deflections	600
-------------	-----

Lumbar

Forces	1000
--------	------

Moments	1000
---------	------

Pelvis

Accelerations	1000
---------------	------

Forces	1000
--------	------

Moments	1000
---------	------

Femur/Knee/Tibia/Ankle

Forces	600
--------	-----

Moments	600
---------	-----

Displacements	180
---------------	-----

Sled Accelerations

60

Steering Column Loads

600

Head Form Accelerations

1000

The direction column on the following sheets describes the transducer output as mounted and wired in the test location. The polarity column indicates whether a polarity change occurred during data acquisition to conform to J211 MAR95. See Report Sign Convention sheet for description of data output as presented in the report: occasionally channels have been adjusted in post-acquisition processing to conform to J211 MAR95.

Channel Report

2/18/2004 7:36:33 AM

Name of Test 040218-1

System MINIDAU

Name of DAU DAU6

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
6001	P21712	HEDXG1	Head Accel X	Rwd	808.59128	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6002	P22733	HEDYG1	Head Accel Y	Lft	799.37548	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6003	P21625	HEDZG1	Head Accel Z	Up	806.14686	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6004	P25076	HEDXR1	Head Accel X Red	Rwd	794.38962	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6005	P16213	HEDYR1	Head Accel Y Red	Lt	807.39268	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6006	P18941	HEDZR1	Head Accel Z Red	Up	811.60339	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6007	1716A-1532-FX	NEKXF1	Neck Force X	Hd	8910.4831	N	- 9/9/2003	OK 059n	Denton	1716A
6008	1716A-1532-FY	NEKYF1	Neck Force Y	Hd	8903.5686	N	+ 9/9/2003	OK 059n	Denton	1716A
6009	1716A-1532-FZ	NEKZF1	Neck Force Z	Hd	13353.823	N	+ 9/9/2003	OK 059n	Denton	1716A
6010	1716A-1532-MX	NEKXM1	Neck Moment X	Rt Ear	282.57842	N-m	- 9/9/2003	OK 059n	Denton	1716A
6011	1716A-1532-MY	NEKYM1	Neck Moment Y	Chn	282.17998	N-m	+ 9/9/2003	OK 059n	Denton	1716A
6012	1716A-1532-MZ	NEKZM1	Neck Moment Z	Chn	282.95095	N-m	+ 9/9/2003	OK 059n	Denton	1716A
6013	P27355	LURYG1	Left Upper Rib Y	Rgt	792.44698	g	+ 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6014	P27178	LURYR1	Left Upper Rib Red Y	Rgt	798.55262	g	+ 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6015	P29214	LLRYG1	Left Lower Rib Y	Rgt	803.51537	g	+ 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6016	P25389	LLRYR1	Left Lower Rib Red Y	Rgt	796.13129	g	+ 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6017	P27211	T12YG1	Lower Spine Y	Lft	399.22027	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6018	P29206	T12YR1	Lower Spine Red Y	Lft	397.99138	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6019	P27228	PEVYG1	Pelvis Accel Y	Lft	402.61384	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6020	P27230	PEVYR1	Pelvis Accel Red Y	Lft	398.85329	g	- 9/9/2003	OK 059n	Endevco	7264C-2K-2-180
6021	J26885	HEDXG4	Head Accel X	Rwd	803.17505	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6022	J26864	HEDYG4	Head Accel Y	Lft	790.78244	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6024	J27950	HEDZG4	Head Accel Z	Up	791.95668	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6025	J27271	HEDXR4	Head Accel X Red	Rwd	799.75007	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6026	J27283	HEDYR4	Head Accel Y Red	Lt	809.00012	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6027	J26980	HEDZR4	Head Accel Z Red	Up	789.53861	g	- 9/9/2003	OK 906n	Endevco	7264-2000TZ
6028	1716A-1535-FX	NEKXF4	Neck Force X	Hd	8891.7885	N	- 9/9/2003	OK 906n	Denton	1716A
6029	1716A-1535-FY	NEKYF4	Neck Force Y	Hd	8908.0907	N	+ 9/9/2003	OK 906n	Denton	1716A
6030	1716A-1535-FZ	NEKZF4	Neck Force Z	Hd	13363.156	N	+ 9/9/2003	OK 906n	Denton	1716A
6031	1716A-1535-MX	NEKXM4	Neck Moment X	Rt Ear	282.72169	N-m	- 9/9/2003	OK 906n	Denton	1716A
6032	1716A-1535-MY	NEKYM4	Neck Moment Y	Chn	282.57318	N-m	+ 9/9/2003	OK 906n	Denton	1716A

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040218

Channel Report

Name of Test 040218-1

System MINIDAU

Name of DAU DAU7

2/18/2004 7:36:33 AM

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
7001	1716A-1535-MZ	NEKZM4	Neck Moment Z	Chn	283.00597	N-m				
7002	P27850	LURYG4	Left Upper Rib Y	Rgt	792.32435	g	+ 9/9/2003	OK 906n	Denton	1716A
7003	P25374	LURYR4	Left Upper Rib Red Y	Rgt	799.23822	g	+ 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7004	P29211	LLRYG4	Left Lower Rib Y	Rgt	787.98325	g	+ 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7005	P25075	LLRYR4	Left Lower Rib Red Y	Rgt	797.20976	g	+ 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7006	P21635	T12YG4	Lower Spine Y	Lft	397.33043	g	- 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7007	P24564	T12YR4	Lower Spine Red Y	Lft	397.12087	g	- 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7008	P21652	PEVYG4	Pelvis Accel Y	Lft	397.45998	g	- 9/9/2003	OK 906n	Endevco	7264C-2K-2-180
7009	P25318	PEVYR4	Pelvis Accel Red Y	Lft	402.78171	g	- 9/15/2003	OK 906n	Endevco	7264C-2K-2-180
7010	P29839	RFSXG1	RGT SIDE SILL FRNT ST X	FWD	396.71470	g	+ 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7011	P28118	RFSYG1	RGT SIDE SILL FRNT ST Y	LT	994.00104	g	- 2/5/2004	OK -1	Endevco	7264C-2K-2-180
7012	P28267	RFSZG1	RGT SIDE SILL FRNT ST Z	UP	398.85640	g	- 1/12/2004	OK -1	Endevco	7264C-2K-2-180
7013	P25042	RRSXG1	RGT SIDE SILL RR ST X	FWD	400.40040	g	+ 1/16/2004	OK -1	Endevco	7264C-2K-2-180
7014	P27508	RRSYG1	RGT SIDE SILL RR ST Y	LT	1010.0213	g	- 1/8/2004	OK -1	Endevco	7264C-2K-2-180
7015	P29974	RRSZG1	RGT SIDE SILL RR ST Z	DWN	403.34016	g	+ 1/14/2004	OK -1	Endevco	7264C-2K-2-180
7016	P30340	RDKXG1	RR FLRPAN ABV AXLE X	FWD	1009.7424	g	+ 12/22/2003	OK -1	Endevco	7264C-2K-2-180
7017	P29847	RDKYG1	RR FLRPAN ABV AXLE Y	LT	1005.2619	g	- 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7018	P29177	RDKZG1	RR FLRPAN ABV AXLE Z	UP	988.79876	g	- 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7019	P28094	LRSYG1	LFT SIDE SILL RR ST Y	RT	985.86667	g	+ 12/26/2003	OK -1	Endevco	7264C-2K-2-180
7021	P27511	LFSYG1	LFT SIDE SILL FRNT ST Y	RT	999.59001	g	+ 1/13/2004	OK -1	Endevco	7264C-2K-2-180
7022	P28599	RRTYG1	RGT RR OCP COMP Y	RT	1508.9890	g	+ 2/4/2004	OK -1	Endevco	7264C-2K-2-180
7023	J37150	LLBYG1	LFT LOWER B-POST Y	RT	1456.2002	g	+ 2/6/2004	OK -1	Endevco	7264-2000TZ
7024	P28313	LUBYG1	LFT MID B-POST Y	RT	1535.5086	g	+ 2/6/2004	OK -1	Endevco	7264C-2K-2-180
7025	P29010	LLAYG1	LFT LOWER A-POST Y	LT	1569.1081	g	- 2/5/2004	OK -1	Endevco	7264C-2K-2-180
7026	P29996	LUAYG1	LFT MID A-POST Y	LT	1524.5354	g	- 2/5/2004	OK -1	Endevco	7264C-2K-2-180
7027	P27518	LFTYG1	LFT FRNT ST TRK Y	RT	1484.7034	g	+ 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7028	P29876	LRTYG1	LFT RR ST TR Y	RT	1527.1273	g	+ 12/24/2003	OK -1	Endevco	7264C-2K-2-180
7029	P29811	VCGXG1	VEH C/G X	FWD	1008.6682	g	+ 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7030	P29898	VCGYG1	VEH C/G Y	LT	1017.3869	g	- 1/23/2004	OK -1	Endevco	7264C-2K-2-180
7031	P30401	VCGZG1	VEH C/G Z	UP	987.57811	g	- 1/14/2004	OK -1	Endevco	7264C-2K-2-180

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Channel Report

2/18/2004 7:36:34 AM

Name of Test 040218-1

System MINIDAU

Name of DAU DAUG

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
0001	EVENT	EVENT	EVENT		5.12	V	+ 11/8/2003	OK -1	TRC	Event
0002	P30027	BCGXG1	MDB Center of Gravity X-Axis	FWD	606.49853	g	+ 12/22/2003	OK -1	Endevco	7264C-2K-2-180
0003	P29849	BCGYG1	MDB Center of Gravity Y-Axis	LT	602.95589	g	- 12/22/2003	OK -1	Endevco	7264C-2K-2-180
0004	P28856	BCGZG1	MDB Center of Gravity Z-Axis	UP	592.69549	g	- 1/12/2004	OK -1	Endevco	7264C-2K-2-180
0005	P30158	LRRXG1	MDB Lt Rear X-Axis	FWD	609.11773	g	+ 12/17/2003	OK -1	Endevco	7264C-2K-2-180
0006	P28892	LRRYG1	MDB Lt Rear Y-Axis	LT	592.86706	g	- 12/17/2003	OK -1	Endevco	7264C-2K-2-180

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040218

Digital and System Channel Report

2004-02-18 07:37:00

Name of Test 040218-1

System MINIDAU

Name of DAU DAU6

descriptio

enable Channel

Short Name

Type

Data File

Module Type

d

Yes 6501

DIG6

dig0

DAT66501

KM3710 Controller

bit position bit

short

long

descriptio

MSB = bit 15

1

SHLET1

Driver Shoulder Contact Switch

B

bit 14

1

PEVET1

Driver Pelvis Contact Switch

C

bit 13

1

SHLET4

Passenger Shoulder Contact Swi

D

bit 12

1

PEVET4

Passenger Pelvis Contact Switc

E

bit 11

0

bit 10

0

bit 09

0

bit 08

0

bit 07

0

bit 06

0

bit 05

0

bit 04

0

bit 03

0

bit 02

0

bit 01

0

LSB = bit 00

0

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040218

Digital and System Channel Report

2004-02-18 07:37:01

Name of Test	040218-1	System	MINIDAU	Name of DAU	DAUG	descriptio
enable	Channel	Short Name	Type	Data File	Module Type	
d						
Yes	0501	DIGG	dig0	DATG0501	KM3710 Controller	

bit position	bit	short	long	descriptio
MSB = bit 15	1	MDBR1	MDB Right Side Contact Switch	Y
bit 14	1	MDBL1	MDB Left Side Contact Switch	Z
bit 13	0			
bit 12	0			
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

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Dummy 059n

Type SID/HIII

Descriptio

NHTSA - 059n SID-LEFT IMP. CONFIG. w/RED ACCELS ICAL'd 9-9-03(DKS)

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/	Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264C-2K-2-18	P21712	Endevco	0.01583 g	2000	9/9/2003	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-18	P22733	Endevco	0.0183 g	2000	9/9/2003	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-18	P21625	Endevco	0.01868 g	2000	9/9/2003	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-18	P25076	Endevco	0.01572 g	2000	9/9/2003	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-18	P16213	Endevco	0.01626 g	2000	9/9/2003	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-18	P18941	Endevco	0.02035 g	2000	9/9/2003	Up	1
NEKXF	Neck Force X	1716A	1716A-1532-FX	Denton	0.000194123 N	8896.4	9/9/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1532-FY	Denton	0.000184311 N	8896.4	9/9/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1532-FZ	Denton	0.00009756 N	13344.6	9/9/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1532-MX	Denton	0.005979823 N	282.5	9/9/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1532-MY	Denton	0.005929558 N	282.5	9/9/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1532-MZ	Denton	0.008416283 N	282.5	9/9/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P27355	Endevco	0.02485 g	2000	9/9/2003	Rgt	0
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P27178	Endevco	0.01781 g	2000	9/9/2003	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P29214	Endevco	0.02655 g	2000	9/9/2003	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25389	Endevco	0.01649 g	2000	9/9/2003	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P27211	Endevco	0.0171 g	2000	9/9/2003	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P29206	Endevco	0.02042 g	2000	9/9/2003	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P27228	Endevco	0.03437 g	2000	9/9/2003	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P27230	Endevco	0.01808 g	2000	9/9/2003	Lft	1

Wednesday, February 18, 059n
2004

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Dummy	906n	Type	SID/HIII	Description	NHTSA - 906n SID-LEFT IMP. CONFIG. w/RED ACCELS ICAL'd 9-9-03(DKS)					
Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/	Fullscal	Caldat	Pos Output	Flip	
HEDXG	Head Accel X	7264-2000TZ	J26885	Endevco	0.02361 g	2000	9/9/2003	Rwd	1	
HEDYG	Head Accel Y	7264-2000TZ	J26864	Endevco	0.02398 g	2000	9/9/2003	Lft	1	
HEDZG	Head Accel Z	7264-2000TZ	J27950	Endevco	0.02586 g	2000	9/9/2003	Up	1	
HEDXR	Head Accel X Red	7264-2000TZ	J27271	Endevco	0.03201 g	2000	9/9/2003	Rwd	1	
HEDYR	Head Accel Y Red	7264-2000TZ	J27283	Endevco	0.02344 g	2000	9/9/2003	Lt	1	
HEDZR	Head Accel Z Red	7264-2000TZ	J26980	Endevco	0.03088 g	2000	9/9/2003	Up	1	
NEKXF	Neck Force X	1716A	1716A-1535-FX	Denton	0.000186952 N	8896.4	9/9/2003	Hd Fd,Cst Rr	1	
NEKYF	Neck Force Y	1716A	1716A-1535-FY	Denton	0.000179612 N	8896.4	9/9/2003	Hd Lt,Cst Rt	0	
NEKZF	Neck Force Z	1716A	1716A-1535-FZ	Denton	0.000093678 N	13344.6	9/9/2003	Hd Up,Cst Dn	0	
NEKXM	Neck Moment X	1716A	1716A-1535-MX	Denton	0.005785841 N	282.5	9/9/2003	Rt Ear to Rt Shld	1	
NEKYM	Neck Moment Y	1716A	1716A-1535-MY	Denton	0.00568 N	282.5	9/9/2003	Chn to Stmm	0	
NEKZM	Neck Moment Z	1716A	1716A-1535-MZ	Denton	0.008186195 N	282.5	9/9/2003	Chn to Lt Shld	0	
LURYG	Left Upper Rib Y	7264C-2K-2-18	P27850	Endevco	0.01795 g	2000	9/9/2003	Rgt	0	
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P25374	Endevco	0.02209 g	2000	9/9/2003	Rgt	0	
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P29211	Endevco	0.02096 g	2000	9/9/2003	Rgt	0	
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25075	Endevco	0.01784 g	2000	9/9/2003	Rgt	0	
T12YG	Lower Spine Y	7264C-2K-2-18	P21635	Endevco	0.01895 g	2000	9/9/2003	Lft	1	
T12YR	Lower Spine Red Y	7264C-2K-2-18	P24564	Endevco	0.01896 g	2000	9/9/2003	Lft	1	
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P21652	Endevco	0.02221 g	2000	9/9/2003	Lft	1	
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P25318	Endevco	0.01926 g	2000	9/15/2003	Lft	1	

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2004

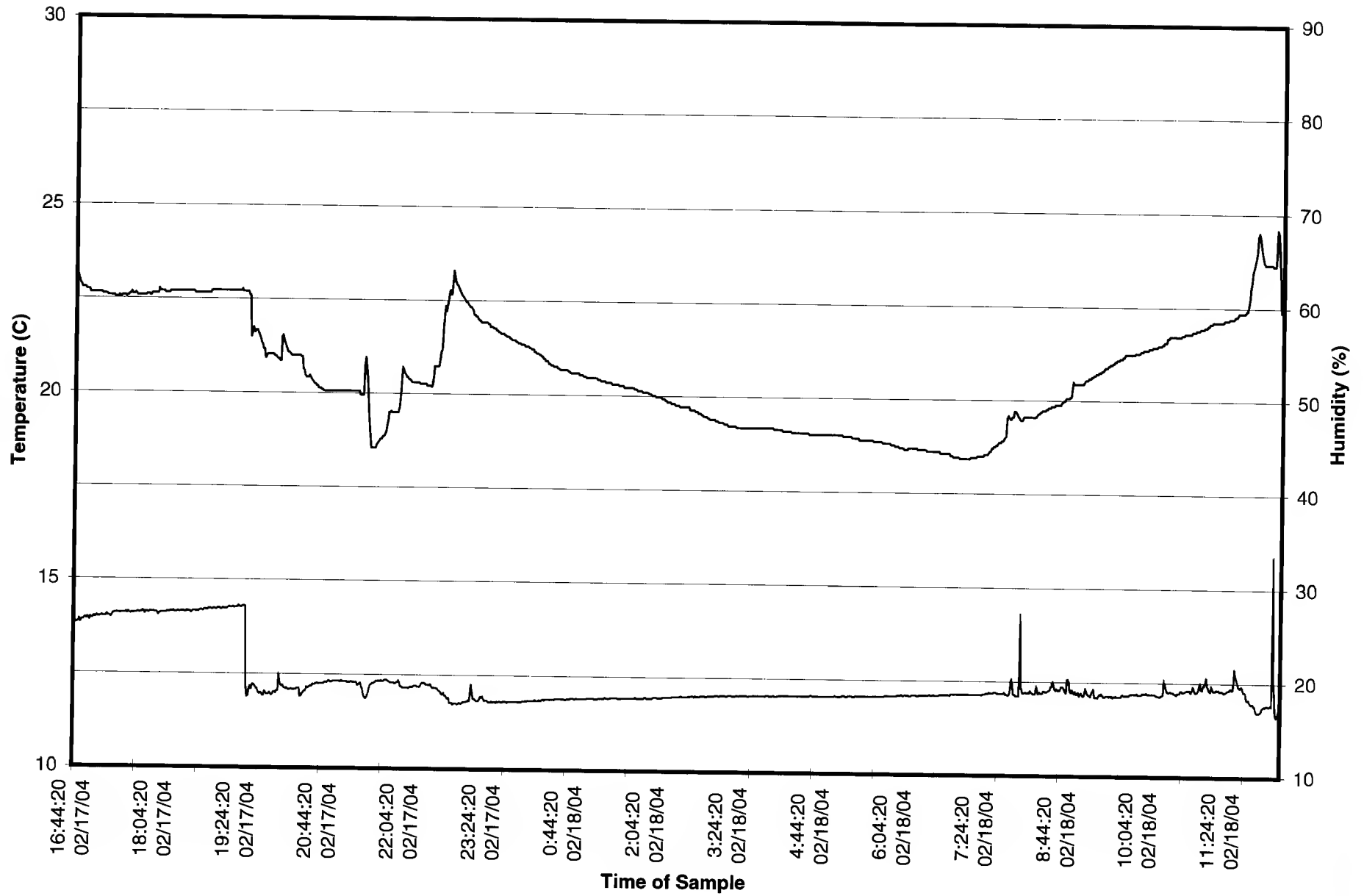
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FMVSS 214 C40508 / 040218

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SIDE IMPACTOR BARRIER CERTIFICATION

Date: February 5, 2004

To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION


Customer P.O. Number: 28450
Work Order Number: 19891
Quantity: 01 piece


CORE INFORMATION

Core Type: PCGA-1/4-5.2-P-3003-T
Measured Cell Size: 0.250 inches
Measured Density: 5.2 pcf

Unit Number: 057A1203

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 232 – 250 psi as per DWG# DSL-1285.


Quality Control Representative
Karl D. Zwaanstra

A circular stamp with 'QA' at the top, 'Plascore' in the middle, and 'Accept' at the bottom.



PLASCORE

Crush Data

232 - 250 psi per DWG # DSL-1285

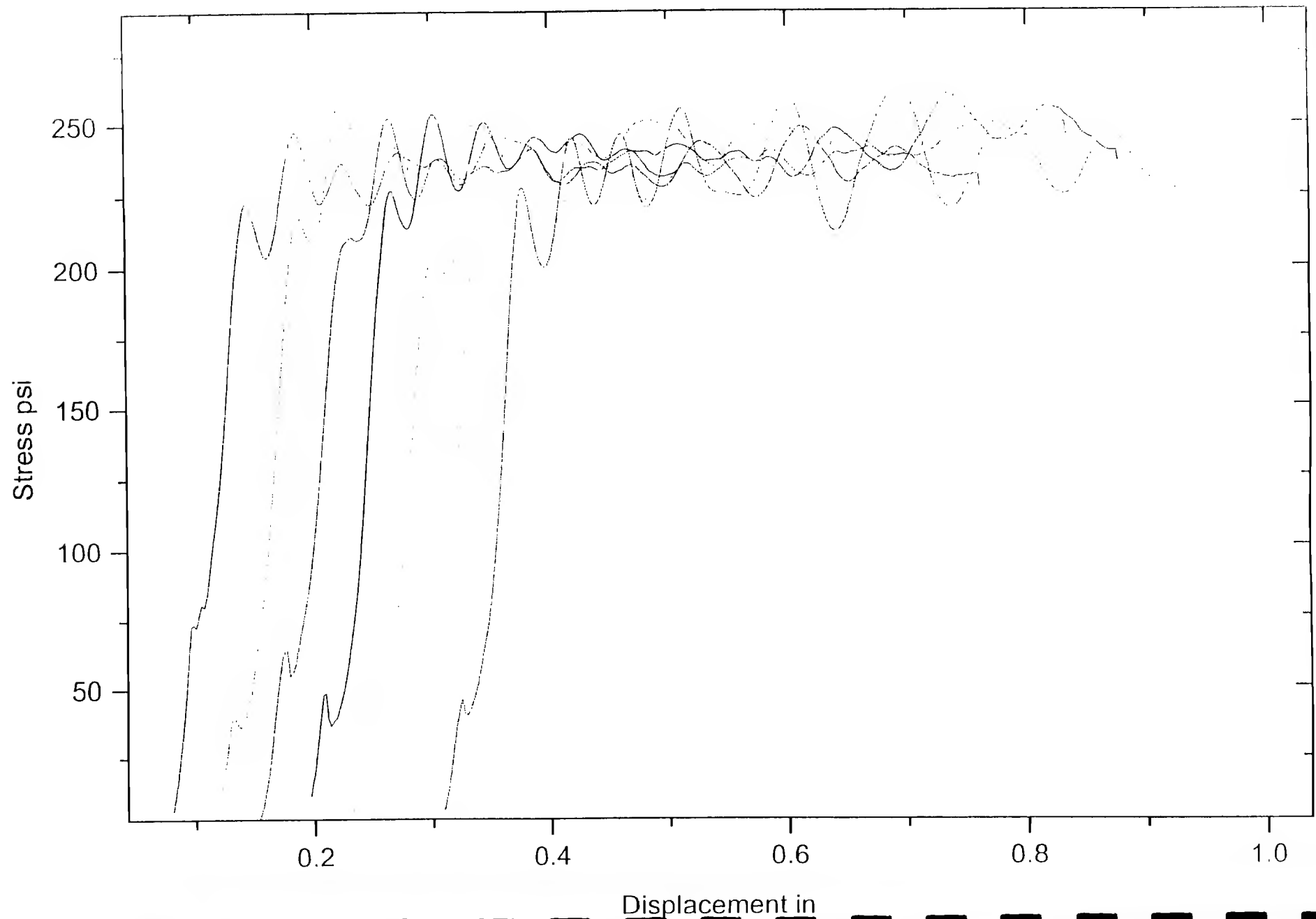
Block Number: 057A1203

<u>Specimen Number</u>	<u>Zone 1</u>	<u>Zone 2</u>	<u>Zone 3</u>
1	234.37	235.85	236.70
2	244.92	243.78	240.24
3	234.87	237.67	245.73
4	241.09	238.32	240.52
5	239.88	236.47	233.91
6	238.82	245.24	246.96
7	242.69	235.68	235.31

BLOCK # 057A1203 Sample ID: IN228820

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SIDE IMPACTOR BARRIER CERTIFICATION

Date: February 5, 2004
To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION

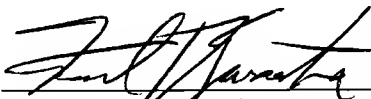
Customer P.O. Number: 28450
Work Order Number: 19891
Quantity: 01 piece

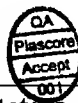
CORE INFORMATION

Core Type: PAMG-3/8-1.6-001-P-5052-T
Measured Cell Size: 0.375 inches
Measured Density: 1.6 pcf

Unit Number: 075B0104

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 45 psi +/- 2.5 psi as per DWG# DSL-1285.


Quality Control Representative
Karl D. Zwaanstra

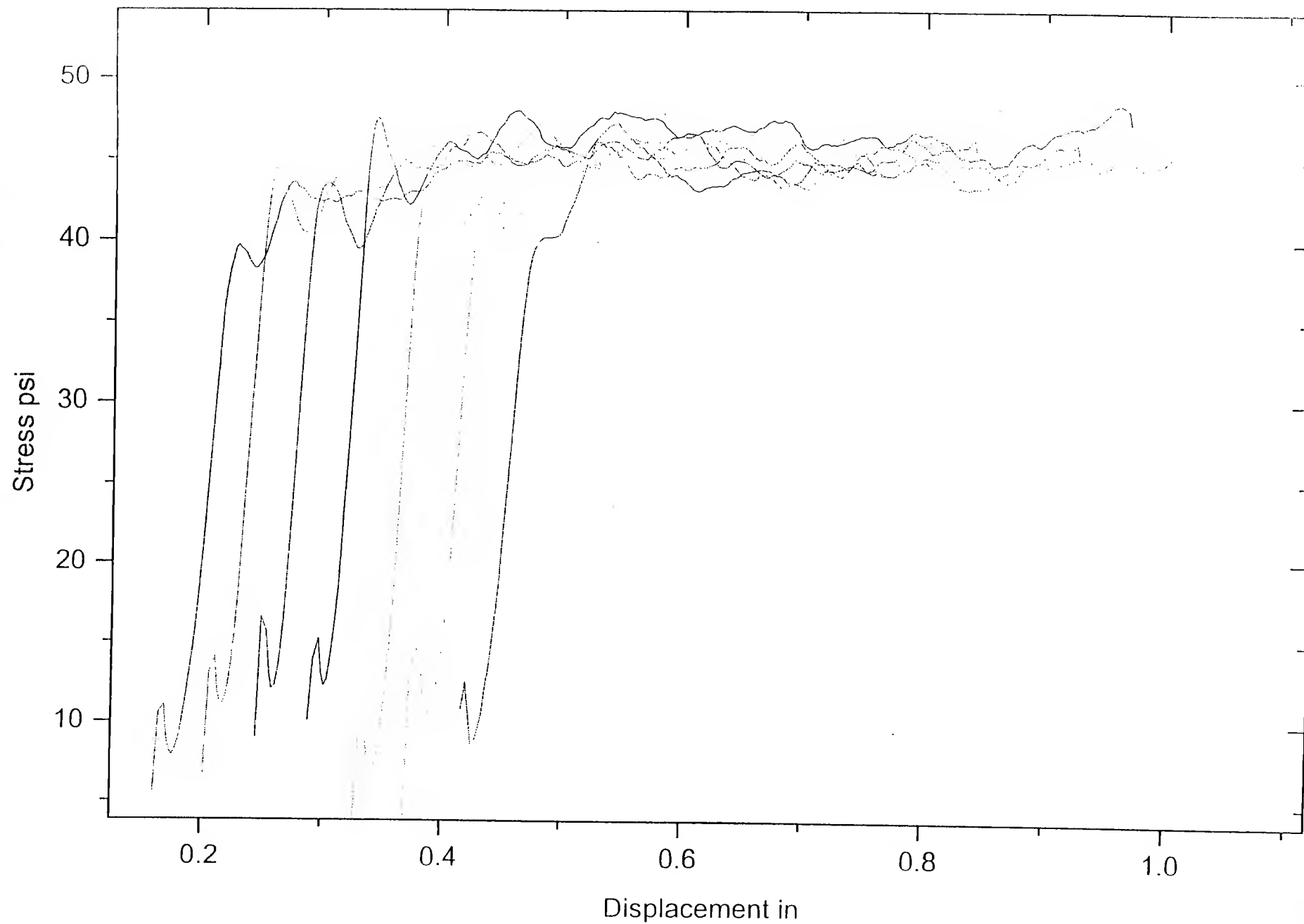


Crush Data
45 psi +/- 2.5 psi per DWG # DSL-1285

Block Number: 075B0104

<u>Specimen Number</u>	<u>Zone 1</u>	<u>Zone 2</u>	<u>Zone 3</u>
1	42.54	44.78	45.13
2	45.74	44.55	45.25
3	45.96	44.47	44.09
4	46.99	46.29	45.39
5	45.10	44.82	44.56
6	45.07	46.66	47.09
7	45.24	44.67	45.26

BLOCK # 075B0104 Sample ID: IN229013



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